The Journal of the American Medical Association

VOL. XXXV CHICAGO, ILLINOIS, SEPTEMBER 15, 1900. No. 11.

Original Articles.

INFANTILE CEREBRAL PALSY.

CLASSIFICATION OF TWENTY-FIVE CASES, WITH ILLUSTRATIONS.*

A. C. COTTON, A.M., M.D.

CHICAGO.

Under infantile cerebral palsy I would include all conditions of impaired function due to cerebral lesion, even if the only symptom be mental deficiency or epilepsy. It will be seen that an extremely wide range of disorders will thus be brought into one clinical group, which would include the restricted congenital spastic rigidity of Little; the cerebral type of hereditary spastic paraplegias described by Frend, Erb, Sachs and others, as well as the lighter forms in which but slight evidence of any paresis is to be discovered at the time of examination.

The following twenty-five cases—save one—are selected from my clinical records of the past year, as fairly illustrative of the majority of the commoner types of infantile palsy:

CASE 1.—Edith N., aged 10 years. Family history negative. Patient is the eldest of four children, all the others being normal. Labor lasted twelve hours. No instruments were used. Mother's health was not as good as usual during pregnancy.

Up to the age of four months nothing unusual was noticed, excepting that she was very irritable. Eruption of teeth began at four months, when she had a severe convulsion, lasting from ten to fifteen minutes. Since then there have been frequent repetitions, at times two to four daily.

When about a year old she began to use a few words, but these were soon dropped and there has been no further acquirement of speech. She had never stood alone and could not sit nor support her head. Intelligence *nil*. Had to be cared for as an infant.

The head measured 19 inches; the eyes reacted to light and accommodation; the mouth was kept open; the lips were thick; the upper jaw was prominent, and the teeth projecting. The thyroid was enlarged; the chest emaciated; there was flaring of ribs, and scoliosis. Organs and abdomen were negative. The contractures of hands and arms were imperfectly overcome by slow exercise of force; the skin was cold and cyanotic; the legs were contracted at hips and knees, the right being always crossed over the left.

CASE 2.—Clara H., aged 10 years. Family history negative. Labor normal, of twenty-four hours duration. No instruments were used. Birth weight, four pounds. In infancy it was noted that she never used arms or legs. At 1½ years she had a convulsion, which had been repeated at varying periods, often monthly. They had increased in intensity; always occurring at night. Contractures of limbs were noticed at about 2 years. Had never sat, walked, or talked. Seemed to understand the most of what was said to her. Had control of sphincters and could indicate when she needed to evacuate bladder or bowels.

The head measured 19 inches; strabismus; the mouth was kept open; the tongue protruding, and saliva escaping; the thyroid was not palpable; contractures at the elbows, wrists, and fingers, also at the hips and knees and left scoliosis; there was deep depression at the sternum; viscera normal; extremities cold and emaciated, and reflexes exaggerated.

CASE 3.—Valeria D., aged 5 years. Family history negative. Labor lasted thirty-six hours, forceps being used late in the case. Had a continuous spasm for three days; since then there have been many recurrences of convulsions, usually apparently due to some indigestion.

The head measured 19½ inches; the expression idiotic; the mouth open; continuous drooling; a high arched palate;

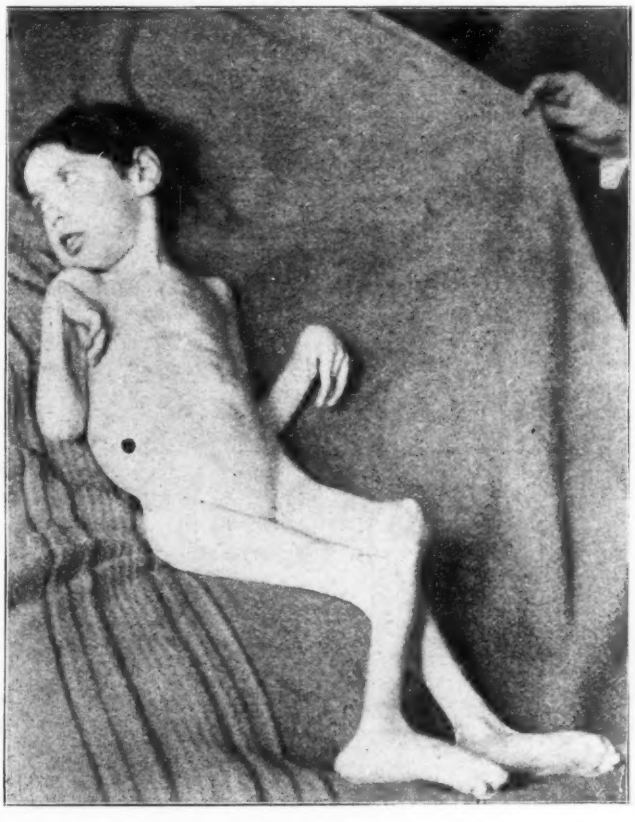

Fig. 1.—Case 1.

diplegia; marked spasticity in lower extremities, less in upper; thyroid slightly enlarged; when excited there was an odd tremor of the lower jaw; repeats a few easy, short words; unable to walk, sit, or even support head; has always had to be fed and has difficulty in deglutition; idiotic.

CASE 4.—Maud B., aged 3 years. Difficult labor; premature at eight months. Strabismus, athetosis, diplegia, rigidity, contractures, mental impairment, microcephalic, and without speech. Has never had convulsions.

CASE 5.—Mattie K., aged 10 years. There had been four other children, all of whom are dead. The first pregnancy resulted in twins, who were born after a labor of five days.

*Presented to the Section on Diseases of Children, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

Both died during the first day of life. A still birth followed. This patient was born after the third gestation, and since there has been another child who only lived twelve hours. At birth patient was too weak to nurse, and is said to have weighed two and one-half pounds. The labor was difficult, forceps finally being used. Infant was comatose one hour and a half after birth. It was noticed as early as three weeks that if startled she would hold her breath until deeply cyanosed. This has not occurred since the age of 2 years. She recognized mother at 8 months; eruption of teeth took place at 12 months; talked at 24 months; walked at 40 months. There has been a tendency to reaction of the head since birth. Always easily frightened.

The head measured 19¾ inches. Strabismus. Articulation

Fig. 2.—Case 2.

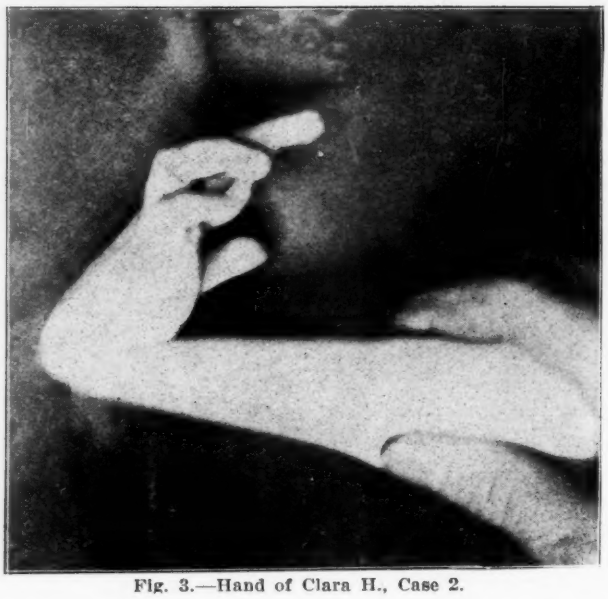

Fig. 3.—Hand of Clara H., Case 2.

slow and indistinct, accompanied by contortions of body and limbs; reflexes exaggerated; slight contractures of both upper and lower limbs; the hands, fingers, and, to less degree, the toes, show athetoid movements; besides these there are present choreiform movements of whole body, nearly constant; said to be as bright as any child of her age; fond of music, and is able to assist in housework.

CASE 6.—Clara H., aged 4 years. There are two other children living and normal. During gestation her mother had pneumonia and did not recover strength the whole term. Parturition was easy. Weight at birth, five pounds, and she seemed very weak; breast fed; dentition normal. Did not walk alone until 3 years of age; also slow about talking. Well developed; voice husky; speech slow; chest and abdomen negative; appetite good, and bowels regular. No incontinence of urine or feces. Gait uncertain and staggering, knees touching, but feet far apart; tendency to fall backward. If running, is unable to stop quickly; inco-ordination of upper limbs; impossible to detect condition of reflexes.

CASE 7.—Dora S., aged 3 years. Four other children, all living and well. Development normal until 1 year old, when she fell down stairs, striking on back of head. Six months after this fall she stopped walking, and now can not stand or sit alone; is not able to hold up head unsupported. The head measures 22½ inches; the fontanel open; no protrusion of the eyeballs; the chest and abdomen negative; mental condition nearly normal; reflexes exaggerated; uses a few articulate sounds.

CASE 8.—Florence H., aged 11 years. Both parents living and well. The history of pregnancies of the mother is: 1, twelve hours' labor, child living and normal; 2, three days' labor, stillbirth; 3 and 4, miscarriages; 5, six hours' labor, Florence,

Fig. 4.—Case 4.

"blue," and did not become red for twenty-four hours; 6, miscarriage; 7, six hours' labor, child an epileptic.

At 18 months had convulsions for half a day, and recurrences every three months or oftener, up to the 7th year. At 5 years she had a convulsion which lasted twelve hours; afterward could not use right arm for two months. She did not stand for a week, and then dragged right foot in walking. At 7 years she had a very severe, prolonged attack, which involved both sides—all previous attacks had affected the right side only. Following this there was paralysis for three months, and she did not speak for four months. Has not had a spasm since the one at 7 years of age. The head measured 20½ inches; the child now speaks as one of 2 years would do.

CASE 9.—B. L., aged 8 years. One of a family of seven children, of whom four are living. A prolonged labor, forceps being finally used; asphyxiated three hours; recurring spasms the first five days of life; none since. The head was normal in

size; right hemiplegia; a marked intention tremor in both arms; no nystagmus; the speech is slow, monotonous and indistinct; the voice husky, and uses very few words; mental impairment; the gait is uncertain, with tendency to cross-legged progression.

CASE 10.—Giovanni S. Labor normal. Birth weight said to be fourteen pounds. Eruption of first tooth at 3 months, when he was very restless, had fever, rolled head from side to side and the eyes became crossed. Was ill for two months, at end of which time he cut a second tooth. After this he seemed better generally, but strabismus continued and he made no effort to use left arm or leg. Thumb of that hand is so tightly adducted that it was necessary to interpose cotton to prevent maceration of skin. Each time he cut a tooth he had a return of nervous symptoms. Has never had any other illness. The head is symmetrical and measured 18⅞ inches. Ptosis of both upper eyelids, and partial paralysis of muscles of face. Strabismus and left hemiplegia; slight spasticity.

Fig. 5.—Case 5.

CASE 11.—Lillie B., aged 6 years. The youngest of three children, the others being normal, mentally and physically. Labor was normal; delicate and did not walk until 4 years of age. The mother can not tell when the difference in the two sides was first noticed; never had convulsions. The head was undersized, measured 19 inches, expression idiotic, strabismus; mouth open the greater part of the time; did not talk; was very restless, in almost constant motion, and frequently laughed immoderately; right hemiplegia more marked in upper extremity; walked and ran around, but dragged right foot; had no control of bladder or bowels; fond of music; had a habit of biting forefinger of right hand.

CASE 12.—Edith C., aged 3 years. Both parents undersized and the father shows many stigmata of degeneration, viz., small head, projecting upper jaw with irregular teeth; lower jaw receding; high palate; voice high and falsetto. No history of specific infection. An older child died at 6 months of some cerebral trouble. Patient had an attack of meningitis with convulsions during the first year. When seen a right hemiplegia was discovered, but the exact date of its onset it has not been possible to secure. She had no teeth; did not walk or talk at 1 year of age; has had frequent digestive disturbances, with fever, constipation, and vomiting. Insomnia, irritability, and restlessness marked at times; has never walked or stood alone; only uses four or five words; picture showed large, misshapen head; ptosis of left eye; partial paralysis of face; right hemiplegia, and deficient mental development.

CASE 13.—Della S., aged 8 years. Mother healthy; father for past seven years had had "spinal disease," probably locomotor ataxia. Patient was healthy up to two years of age. At that time she was struck on the head, producing a wound

Fig. 6.—Case 8.

that bled freely. Two weeks after injury, while nursing, she suddenly stiffened and began to twitch limbs. This continued for a short time, then the muscles relaxed, though she did not regain consciousness, and spasms were repeated at intervals of five hours. The following day she seemed fully recovered. Two or three weeks later she had a similar attack, followed by coma, lasting through the whole night. For the next six months she seemed quite well; talked, walked, played, etc., and at 2 years of age she had learned to speak some English and German. When 2½ years old she had a severe convulsion, perfect relaxation not coming for four hours. Following this she did not seem to notice anything; did not talk; one side of face was drawn, and right side of body and limbs were paralyzed. Six weeks later she began to walk and to use her arm. The leg gradually improved, as did the face, but the arm and hand have shown less improvement. Complete aphasia lasted for three years. She has acquired a limited vocabulary since, but this is wholly in English. Since the severe convulsions of 2¼ years there had been no recurrence until six months ago when she began to have "spells;" grasped her throat, ran to her mother as if frightened, stared blankly but did not fall

or twitch muscles. These lasted only a minute or two, but were frequent, sometimes daily.

CASE 14.—Herbert C., aged 25 years. Family history negative. Well up to 6 months of age, at which time he had an attack of meningitis, during which he had several convulsions. He lay in a semi-comatose condition for several days and recovery was not looked for. Following this there was a right hemiplegia, with strabismus. Did not walk alone until 5 years of age. By the aid of braces and walking machines he learned to walk, for a considerable time with a staggering, uncertain gait. He was slow also in learning to talk, enunciation being difficult and indistinct. Was generally good-natured. When 12 years of age he was sent to Lincoln to the school for feeble-minded.

Fig. 7.—Case 9.

He attended two years and made great improvement, learning the use of paretic hand and arm so as to be able to use musical instruments and tools in gardening. The body developed, but right side never attained full size or strength. Spasticity was moderate, and even this seemed less after about 10 years.

CASE 15.—Annie D., aged 3 years 8 months. Second in family of four children. The eldest this last winter had an attack of meningitis, which was followed at varying intervals by epileptic seizures. The labor was normal. At 4 months of age patient had pneumonia, from which attack she did not recover for two months. At the same time she had a suppurative otitis media. During that time it was noticed that the right side was not used as freely as the left.

At present she is well developed and nourished. The affected side is a little smaller than the opposite. The head is normal in size; strabismus, right hemiplegia, contracture and rigidity; slow about learning to talk, did not attempt to talk until 3 years of age, and speech is still very limited, with articulation indistinct. She understands all that is said to her, and shows no deficiency in mentality. Reflexes are exaggerated. Has never had any convulsions.

CASE 16.—Celia C., aged 9 years. Second child in a family of six, all the others living and well. Parents in good health. She was well until October, 1899, when she had a suppurative cervical adenitis. This opened spontaneously, and nothing further was noticed until early in March, 1900. On coming home from school one day she complained of pain in left side of the chest, and headache. She was restless during the night, and in the morning began having general convulsions, and became unconscious and cyanosed. With only short intervals of partial relaxation she continued in convulsions for nine days. Since then there have been no recurrences, but following these there was left hemiplegia. The pupils react to light; the hand is nearly a typical claw hand. She is very irritable and noncommunicative, rarely asking or answering questions unless so inclined. She hears and understands quickly.

CASE 17.—Eva T., aged 4 years. Family history negative. She had never had any illness; had never walked, and had not even been able to stand; strabismus since six months old;

Fig. 8.—Case 11.

had never had convulsions. The head measured 21 inches; the face large and expressionless; reflexes exaggerated; spasticity of legs which were held stiffly extended; intelligence almost *nil;* made a few sounds which her mother could interpret.

CASE 18.—Giovanni H., aged 6 years. History incomplete, as his mother understood and spoke but very little English. His father was described as not strong enough to work, "no good." There were five other children, all living. An older sister, a girl of 14 years, had had several attacks of chorea, and another sister showed some mental deficiency. The head measured 19 inches; the ears stood far out from the head; Darwinian tubercles present; eyes wide apart; saddle-shaped jaw; lanugo all over body. Musculature was good, but patient

could not walk any better than a child 1 year old; his mental development also was backward, not being able to talk better than a child of 1½ years; never had convulsions.

The acompanying tabulated outline shows the common clinical features:

Fig. 9.—Case 12.

Fig. 10.—Case 13.

Sex.— Of this collection 18 are females and 7 males. The majority of the writers on this subject have stated that more boys are affected. Osler reported that he found no difference in the sexes and Gowers' cases showed more girls than boys.

Time of Onset.—The table shows that the probable commencement of the disease dates from or before birth in 17, while in 5 of the remainder the symptoms developed during the first year. This agrees with the findings of others, who report that the large majority occur under one year. It would seem to corroborate the opinion that the "younger the infant the greater the damage done; the more immature the brain, the more is its development likely to be interfered with." Nevertheless, Collier holds that the tissues of the young have more inherent vitality for repair than do those of later life.

Exciting Causes.—An analysis of the exciting causes from the clinical histories gives: Accidents of birth 7, or 28 per cent.; accidents, infections or autointoxication during infancy or childhood 7, or 28 per cent.

Form.—The high percentage of diplegics in this table —7 out of 25, 28 per cent.—attracts our attention. In

Fig. 11.—Case 14.

the large number of cases collected by Sachs and Peterson the diplegics form only 15 per cent.

Convulsions.—Eighteen, or 72 per cent., gave history of convulsions during some part of the disease. In fact, it is most frequently for this symptom that the child is brought to the clinic.

Mental Conditions.—As to mentality, it is seen that out of 11 double-sided lesions 7 are idiots, two others are mentally impaired, while 1 only is nearly normal. Out of the 8 hemiplegics only 2 are idiots, 5 more or less impaired. and 1 nearly normal, which shows the preponderance of damage from lesions affecting both sides of the brain.

Size of Head.—That over half are microcephalic, merely emphasizes the well-known fact that there is an arrest of brain growth in these cases. In fact, the same arrest may occur in the hydrocephalic. It is nothing more than fair to call attention to the fact that some of these cases are seen so early after the onset that added time would doubtless show a still larger number of disproportionately small heads.

Irregular Movements.—The small number of patients (2) exhibiting athetoid movements will attract attention, and these two were both found in diplegics, as

seen in the illustrations (Nos. 4 and 5). This is contrary to general observation.

Dysphasias.—As might be expected, dysphasia, more or less marked, seems to be the rule. It is interesting to note that the cases showing improvement in speech, after complete arrest, were hemiplegic. This is suggestive of the utilization of the unaffected side of the cerebrum, which comes to the relief of aphasia caused by lesions occurring in early life. Of the 7 cases of diplegia, 4 show permanent dysphasia, 1 can say but a few monosyllables, 1 is slow of speech and 1 has difficult speech from paresis of muscles required in vocalization.

In this last case, Mattie K., it may be mentioned that the mentality shows but slight, if any, permanent impairment. This is proved by the fact that she learned readily the fortnight she was sent to school and that she is bright and useful around the house. The interesting feature of this case is the escape from mental impairment in a case of diplegia, although presenting nearly all of the typical symptoms, viz., spasticity, contractures, convulsions, microcephalia, strabismus, ptosis,

Fig. 12.—Case 16.

exaggerated reflexes with athetosis, choreiform and associated movements.

In the case of B. L., with history of long labor and forceps delivery, followed by eclampsia for five days; child asphyxiated for three hours; right hemiplegia, spasticity, contractures, exaggerated reflexes and some mental impairment, we have a marked intention tremor, which, with his slow, monotonous speech, is suggestive of multiple sclerosis of the cord; but it lacks the nystagmus commonly associated with these lesions. Spencer found, out of 130 autopsies, 4 on stillborn infants, 30 with hemorrhage into the spinal cord and canal. With this in mind, may it not be fair to presume that this child suffered from spinal as well as a cerebral hemorrhage?

CASE 21.—Mamie Q. is 10 years of age with slight mental impairment, choreiform movements, convulsions, and a history of meningitis at one year. Although presenting no spasticity, contractures, paralysis, exaggerated reflexes or difficulties of speech, I have classed this as a case of cerebral palsy. Sachs says: "The choreiform movements occurring after cerebral palsies deserve some special notice, for such conditions are at times mistaken for cases of ordinary chorea.

CASE 22.—Male, aged 5 years, 6 months, a microcephalic idiot, with marked lalopathy and history of convulsions, is also wanting in the usual distinguishing symptoms, as are Cases 23, 24 and 25. These four cases, I believe, are properly rated as cerebral palsies under the broader classification given at the beginning of this paper. As long as we use the term "cerebral palsy," should we not include thereunder all conditions in which the principal etiologic factor is evidently a brain lesion, affecting the motor, speech or intellectual areas, whether due to thrombosis, embolism, hemorrhage or meningitis, resulting in sclerosis, effusion, growth or porencephaly?

Fig. 13.—Case 17.

Fig. 14.—Case 18.

DISCUSSION.

DR. WILLIAM M. LESZYNSKY, New York—Regarding idiocy and imbecility, I think they may often be classed in the same category as the infantile cerebral palsies, for the latter are frequently associated with mental enfeeblement. I was surprised to hear Dr. Wilmarth say that better individual train-

No.	Name, Sex, Age.	Etiology.	Exciting Cause as Given by Family.	Form of Paralysis.	Spasticity.	Contracture.	Convulsions.	Mental Condition.	Size of Head.	Reflexes.	Strabismus.	Ptosis.	Athetoid, Choreic or Associated Movements.	Speech absent, limited or difficult.
1	E. N., F., 10 yrs	Prenatal	Dentition	Diplegia	Present	Present	Yes	Idiot	Microcephalic	Exaggerated	No	No	No	Absent.
2	C. H., F., 10 yrs.	Prenatal	Unknown. Wt. at birth 4 lb	Diplegia	Present	Present	Yes	Idiot	Microcephalic	Exaggerated	Yes.	Yes.	No	Absent.
3	V. D., F., 5 yrs	Natal	Long labor; forceps	Diplegia	Present	Present	Yes	Idiot	Microcephalic	Exaggerated	No	No	Choreic	Limited.
4	M. B., F., 3 yrs.	Natal	Premature (8 mos.). Dystocia.	Diplegia	Present	Present	No	Idiot	Microcephalic	Exaggerated	Yes.	No	Athetosis	Absent.
5	M. K., F., 10 yrs	Prenatal	Dystocia and forceps. Wt. 2½ lb	Diplegia	Present	Present	Yes	Nearly normal	Microcephalic	Exaggerated	Yes.	Yes.	Choreic and associated.	Difficult.
6	C. H., F., 4 yrs.	Prenatal	Mother had pneumonia during gestation. Weight 5 lb.	Diplegia	Present	Present	No	Impaired	Microcephalic	Impossible to detect.	No	No	Choreic	Difficult and slow.
7	D. S., F., 3 yrs.	Post-natal.	Fall at 1 year	Diplegia	Very slight	Very slight	No	Normal	Macrocephalic	Exaggerated	No	No	No	Absent.
8	F. H., F., 11 yrs.	Prenatal.	Asphyxia	Right hemiplegia.	Absent	Absent	Yes.	Impaired	Microcephalic	Normal	No	No	No	Limited.
9	B. L., M., 8 yrs.	Natal	Long labor; forceps; asphyxia	Right hemiplegia.	Present	Present	Yes.	Impaired	Normal	Exaggerated	No	No	Intention tremor.	Limited.
10	J. S., M., 10 mos.	Natal	Dystocia. Weight 14 lb	Left hemiplegia	Present	Present	Yes	Impaired	Macrocephalic	Exaggerated	Yes.	Yes.	No	(Too young.)
11	L. B., F., 6 yrs.	Prenatal	Unknown.	Right hemiplegia.	Present	Present	No	Idiot	Microcephalic	Impossible to detect.	Yes.	No	No	Absent.
12	E. C., F., 3 yrs.	Prenatal	Meningitis first year	Right hemiplegia.	Slight	Slight	Yes.	Idiot	Macrocephalic	Exaggerated	Yes.	Yes.	No	Absent.
13	D. S., F., 8 yrs.	Post-natal.	Accident at 2 years	Right hemiplegia.	Present	Present	Yes.	Impaired	Normal	Exaggerated	No	No	No	Limited.
14	H. C., M., 2½ yrs	Post-natal.	Meningitis at 6 months	Right hemiplegia.	Present	Present	Yes.	Impaired	Macrocephalic	No record	Yes.	No	No	Limited.
15	A. D., F., 3½ yrs	Prenatal	Pneumonia at 4 months	Right hemiplegia.	Present	Present	No	Nearly normal	Normal	Exaggerated	Yes.	No	No	Did not begin to talk till 3 yrs. old.
16	C. C., F., 9 yrs.	Post-natal.	Meningitis at 9 years	Left hemiplegia	Present	Present	Yes.	Impaired	Normal	Exaggerated	No	No	No	Taciturn.
17	E. T., F., 4 yrs	Prenatal	Unknown	Paraplegia	Present	Present	No	Idiot	Macrocephalic	Exaggerated	Yes.	No	No	Very limited.
18	J. H., M., 6 yrs.	Prenatal	Unknown	Paraplegia	Present	Absent	No	Impaired	Microcephalic	Normal	No	No	No	Very limited.
19	E. B., M., 13 mos.	Prenatal	Meningitis at 3 months	Paraplegia	Absent	Absent	Yes.	Idiot	Macrocephalic	Exaggerated	Yes.	No	No	(Too young.)
20	R. S., F., 3 yrs.	Natal	Forceps. Weight 5 pounds	Paraplegia	Present	Absent	Yes.	Idiot	Microcephalic	Exaggerated	No	No	Head banger	Absent.
21	M. Q., F., 10 yrs.	Post-natal.	Meningitis at 1 year	Only evidence in choreiform movements	Absent	Absent	Yes.	Nearly normal	Normal	No record	No	No	Choreic	Normal.
22	R. P., M., 5½ yrs	Post-natal.	Digestive disturbance at 5 yrs.	None	Absent	Absent	Yes.	Idiot	Microcephalic	Normal	No	No	No	Repeats words 6 or 7 times. Limit'd.
23	A. G., M., 4 yrs.	Prenatal	Digestive disturbance at 1 yr.	None	Absent	Absent	Yes.	Impaired	Microcephalic	Impossible to detect.	No	No	No	Limited.
24	E. R., F., 2½ yrs.	Prenatal	Catheterization at 1 day	Right facial and ocular	Present	Present	Yes.	Idiot	Microcephalic	Impossible to detect.	Yes.	No	No	Absent.
25	M. H., F., 3 yrs.	Post-natal.	Fall at 1 year	None	Absent	Absent	Yes.	Idiot	Microcephalic	Normal	No	No	No	Absent.

ing could be brought about in institutions than at home. There are certain exceptions to this rule, for, under proper surroundings, individual management, I think, can be carried out better at home, or in a very small institution in which only four or five children are taken. As to the circulatory disturbances, I do not think that Dr. Taylor has proved his point. It seems to me that they are more probably the result of a cerebral defect reacting through the vascular centers in the brain. Much more can be said about infantile cerebral palsy. I think it would be an excellent rule for the general practitioner to examine every child brought to him suffering from epilepsy for evidence of infantile cerebral palsy. These children may make a certain amount of recovery, and the condition of partial paralysis may not be manifested sufficiently to attract the patient's attention, until symptoms of epilepsy are developed, either in the form of petit mal or grand mal. The most unsatisfactory epileptics to treat are those in whom the epilepsy is a terminal condition of the cerebral palsy.

DR. J. P. CROZER GRIFFITH, Philadelphia—The mistake is very commonly made of calling many cases chorea, Friedreich's ataxia, etc., which are really due to cerebral injuries in early life.

I wish to call attention to the rarity of tremor as a post-cerebral symptom. I notice that Osler, in his book on cerebral palsies, reports, out of all his cases, only one of post-hemiplegic tremor. I have myself seen only one case. It is certainly a comparatively rare condition, whereas the spastic conditions—the cases of single or double choreiform movements—are undoubtedly very common indeed.

I can heartily indorse what Dr. Leszynsky has said about the relation of cerebral palsy to epilepsy.

DR. J. MADISON TAYLOR, Philadelphia—In reply to Dr. Leszynsky's criticism of Wilmarth's assertion that the best treatment for defective children is to be had in institutions for the management of imbeciles, I desire to say that at one time I entertained the same opinion, because there was reason to believe, from analogy, that home treatment should be the best. I wish to say now that experience has taught me differently, and I am convinced the best results can be had by systematized and specialized instruction among children of the defective classes, with others of similar grade alongside of them as stimulants to effort. It is easy to imagine that the opportunities afforded by limitless wealth might give an equal or better training at home, but I am sure that the average case can be better handled in institutions properly equipped for such instruction. The subject is most important, and one on which the physician is constantly consulted, and he needs to form clear concepts on the matter.

DR. COTTON—We are all anxious to hear what those who are conducting an educational system for this unfortunate class have to report. With one exception, these twenty-five cases were taken from my clinical records of the past year. The exception is the case represented by photograph No. 14. The child had meningitis at 6 months. There were repeated convulsions, and a semi-comatose condition supervened, which lasted four days. At 12 years of age the child was sent to the School for Feeble-Minded in Illinois. He improved there so that he could play in a band and could use certain tools. The outlook for that case was at first gloomy, but the results have been such that I believe the importance of educational work can not be overestimated.

THE MILK-CONTROL IN THE KAISER UND KAISERIN FRIEDRICH HOSPITAL IN BERLIN.*

DR. SOMMERFELD.

ASSISTANT CHEMIST AT THE HOSPITAL.

BERLIN.

In this report I shall deal with the determination of temperature, the specific weight, the chemical analysis of foreign matter and the bacteriologic examination.

*Presented to the Section on Diseases of Children, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

When the milk is brought into the hospital, the dairy-maid takes the temperature of the milk, and makes a record of it, which is filed in the journal of the laboratory at the end of each month. The temperature shows whether the milk has been properly cooled. It should not have a higher temperature than 10 C. If it should be higher the sender is notified, who must remedy this, and if it occurs again he is subjected to a fine. The specific weight is obtained by means of an exact areometer. If there is any doubt we first take the specific gravity of full milk, allow the cream to rise in a cylinder, remove the skimmed milk by means of a faucet near the bottom of the cylinder and again take the specific gravity. After a great many examinations, we find that full milk from our stable has a specific gravity of 1029 to 1032; and skimmed milk of 1032 to 1038. By testing the acidity of the milk we frequently can determine its freshness in suspicious milk delivered. The acidity is determined by a sample taken from a can, a second sample being put into a thermostat and allowed to remain there for one hour at a temperature of 37 C. If there is any difference between the two, the milk is at once questioned, and regarded as not being fresh. To determine this, 25 c.c. of milk are mixed with eight to ten times as much distilled water, to which 1 c.c. of a 2 per cent. alcoholic phenolphthalein solution has been added. To this is added a solution of barium hydrate, 10.69 gm. of baryta to a liter of water. This is filtered until it leaves a faintly red color. To secure this with our infants' milk we need from 15.8 to 17.5 c.c. of barium solution, whereas with the ordinary milk we need from 16 to 19 c.c.

Exact chemical and also bacteriologic examinations are made at different times, or when specially called for. Through sudden and unexpected taking of samples we obtain valuable analytical data. Such analyses are made for the determination of dry substances, fats, albumin, sugar, mineral salts, acidity and specific gravity. Dry substances and fats are determined at least once a week. The first is accomplished by subjecting 10 c.c. to a temperature of 110 C. for twenty-four hours in a platinum vessel. Fats are determined by the Soxhlet's areometric method, or after the Libermann-Szekely-Weiss method: In a small glass-stoppered cylinder 50 c.c. of milk are placed, to which 5 c.c. of caustic potash, 50 c.c. of petroleum ether—low boiling—and 50 c.c. of alcohol (96 per cent.) are added and shaken three times, for five minutes each time. The whole layer of fat is contained in the petroleum-ether, from which all liquid parts can be removed with the pipette and evaporated to dryness. The dried residue which remains after being subjected to a temperature of 105 C. is weighed and the comparative amount estimated. Our infants' milk during the last three years has contained 3.26 per cent. of fat.

To determine the amount of milk impurities we examine several times each week. This is done after the method of Renck-Stutzer, improved by Sommerfeld. This consists of a jar with a stopper, containing about 1½ liters, having an additional small bucket on its side which ends in a faucet. All sharp corners serve as dirt-receivers, and have been avoided, therefore the apparatus is rounded from top to bottom. This is filled with a known quantity of milk, and is kept standing for about two hours. By this time the foreign matter has settled and sedimented in the small compartments. The clear milk is now drawn off by the faucets on the sides. The attached utensil is taken off and the milk, combined with the dirt, put into a goblet, diluted with water, and then put into a filter, which has previously been weighed. This is washed over and over again with distilled water until the filtered portion is perfectly clean, then washed once with alcohol, and once with ether, and lastly dried at a temperature of 110 C. Thanks to the thorough cleanliness, the milk for nurslings seldom contains doubtful masses of dirt. As the cream rises in the apparatus while standing, we utilize the same opportunity for determining the specific gravity of the skimmed milk, since this runs off first on opening the faucet.

The bacteriologic examination of the milk is made with a view to determine the character of the bacteria present. The determination of the various forms is made in special instances, e. g., with the milk of newly-acquired cows, and when any special cow is suspected. A great many bacilli and cocci are utilized for cultures and animal experiments, to see how they affect sterile milk and to prove their harmlessness. As the cows are under the supervision of physicians, and as the milk is never used in the raw state, we have seldom occasion to examine the milk for pathogenic micro-organisms, since it is a known fact that pathologic bacteria are destroyed at 100 C. Nevertheless, we convince ourselves that none is present, especially the tubercle bacillus, by injecting guinea-pigs at monthly intervals with milk sediment procured by centrifuging. Up to the present we have found none that are pathogenic. To count the number of germs it is necessary to dilute 0.1 c.c. of milk with sterile water, the milk being taken from the cans in a sterilized pipette, and, depending on the time of the year, to inoculate either nutrient gelatin or nutrient agar therewith.

The counting is done by means of Petri dishes, which are used in making the cultures, the under side divided into squares. The gelatin plates are put into a temperature of 22 C., and are counted after twenty-four to forty-eight hours, whereas the agar plates at the same temperature are counted after twenty-four hours. Samples of the milk are taken from the sterilizer and put into the thermostat at a temperature of 37 C., to prove how long the milk will keep. Milk specimens which do not curdle during the first twenty-four hours shows that the lactic acid bacilli are killed. As the milk is used within ten hours after the sterilization, in the wards of the hospital, we take samples of milk from the ice after eight hours. The negative results of our examination prove that the sterilization has been satisfactorily performed, although we frequently see, on the other hand, that the milk could hardly be classed as germless.

THE MILK-SUPPLY IN THE KAISER UND KAISERIN FRIEDRICH HOSPITAL IN BERLIN.*

PROF. DR. A. BAGINSKY.
DIRECTOR OF THE HOSPITAL.
BERLIN.

The attention given by American physicians to milk-supply and milk-sterilization for nurslings prompts me to give my experience in this regard, for I believe that in our hospital we have reached the highest point attainable on this subject. Depending on our milk-supply from neighboring stables, and having noticed the inadequacy of this supply, we made it a point to acquire such a stable for the hospital, especially since we, through an arrangement with the municipal authorities, were called upon to treat a large number of sick nurs-

*Presented to the Section on Diseases of Children, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

lings in which the strictest possible care of both the production and the milk-supply could be maintained and carried out. Owing to the success attained in this regard we have not found it necessary to establish our own dairy. By means of contracts we are able to control several special milk-dealers who are compelled to carry out the rules given them, and they have learned that only the most exact attention to detail will prevent our criticism. In order, therefore, to produce the best possible product of a dairy, it has been necessary for me to watch every detail, and in this I have been most ably supported by my assistant, Dr. Sommerfeld.

The control of the milk-supply necessarily begins with the stable, which is divided into two floors, and is built of Rathenower bricks, iron and cement. The lower floor is divided by a large massive wall into two parts, which have separate entrances, a larger and a smaller, the upper story representing one room. The dimensions of the buiding, which has large windows on both the longest sides are: length, 30 meters; breadth, 11 meters; height, 4 meters. The floors throughout are of massive stamped cement, and are sloped so that there is a thorough flow into the sewer. The walls are covered with glazed brick to the height of a man, over which is a coat of white paint. The cows stand on so-called food tables, which are placed at right angles to the longest side of the stable. These tables are made of cement, 2 meters wide and 8.50 meters long, in which mangers of glazed clay are placed. In the upper stable there are three such tables which are arranged for seven cows on either side, so that forty-two animals can be kept in the entire stable. The food tables are more practical than the mangers which run along the whole wall, because one can better oversee and observe each animal separately. The separate stands for the cows are raised and are 2.75 meters long, sloping with a heel in the back. In the standing and lying position the buttocks of the cows stick out over the stand so that the animals very seldom lie with the udder in the dung. The water-supply is furnished by means of an automatic working "self-drinker," which is attached to the water-works. The animals can in this way drink when they want to, the waste water being replaced by running fresh water.

The larger portion of the lower stable is arranged exactly like the upper portion. There are two feeding stands intended for procuring milk from 28 cows fed on dry fodder only, the smaller portion contains six stands for the observation of specified cows. This serves as a quarantine, and isolating stable for newly-acquired cows, and eventually for cows which show signs of sickness. In all the stables the cows stand on sawdust, which, on account of its cleanliness, is more approved than the dark black turf grass, the filth being more noticeable and calling for a better cleaning. The disinfecting element of the turf-grass is less advantageous than that of the sawdust. The stables are cleaned by washing and flooding the floors and the tiled walls; also by frequently whitewashing the walls. The manure is pushed through convenient openings directly into brick pits built in the yard adjoining the walls.

The dairy is entirely separated from the stables, and is in a special building. This is very light, and is on a level with the cellar, where an evenly cool temperature is obtained. It is finished throughout—the floors, walls and ceiling—with flat white bricks, has well-water supplied by the water-works of Berlin and a cooling apparatus. Here the fresh-drawn milk from the stable is filtered, cooled and put into the cans ready for transportation. Utensils and cans in which the residue of milk remains can not be brought into this space. In the same manner we prohibit the entrance of dairymen, drivers and others not employed in this department. All soiled utensils are placed in a special wash-room adjoining the dairy, entirely separated from this room by means of a wall, and having a distinct entrance.

The cows belong to the Holland breed, and are under constant veterinary supervision. All animals are injected with tuberculin and only those animals totally free from tuberculosis are put to use. The injection of tuberculin is repeated several times. If the weather permits, the animals are given several hours of outdoor exercise, which has proved of great advantage.

The feeding is done in two ways. The animals whose milk is to be used for infants are given dry fodder. Swill is entirely forbidden for those receiving moist fodder. It has been frequently noticed that from the residue made by the distillation of brandy from potatoes and corn, animals have a tendency to diarrhea, and their milk has a tendency to produce toxic conditions, the nature of which can not be proved by either bacteriologic or chemical examinations. The dry-fed cows get the best of clover, certain residues from a brewery, wheat, bran and rye, and to stimulate the appetite, small quantities of dry cut molasses. The cows receiving moist fodder are given turnips, rye-bran, wheat-bran and hay. The proportional quantities of the amount of the entire feeding are the following:

Dry fodder: To 500 kilo., live weight, 12.5 kilo. clover, 2.5 kilo. rye-bran, 2.5 kilo. wheat-bran, 1.5 kilo dry treber.

Moist fodder: To 500 kilo., live weight, 22.5 kilo. moist fodder, 20 kilo. turnips, 0.75 kilo. rye-bran, 0.75 kilo. wheat-bran, 4 kilo. hay.

From this feeding we receive 8 liters of milk per day with dry fodder and 10 to 11 liters with moist fodder. The animals are milked three times a day, at 3.30 a.m., and 12.30 and 4.30 p.m.

Before milking, the damp stable is cleaned. The dirt is swept together after the dampness has disappeared, and the passageways are flooded with water. Immediately before beginning work, the dairymen are compelled to thoroughly cleanse themselves, and especially wash and scrub their hands with soap and water, and then to carefuly cleanse the udder of each animal with soap and warm water, and a clean cloth. On thorough cleansing of the udder great stress is laid, because therein lies the greatest chance of infecting the milk from the dirt of the stable, hair, etc. We believe that by using the above-mentioned precautions, we can safely dispense with milking machines.

The freshly drawn milk must be immediately taken from the stable and brought to the dairy. When there are a large number of cows, the milk taken from the first must not remain until all are milked. The reasons for this immediate removal of milk are the danger of contamination with bacteria, which are found in the air of the stable and are mostly of the hay and potato variety and are very hard to destroy, and the fact that warm milk easily absorbs odors, such as perspiration from the cow, so that it tastes like a "cow stable." The milk is immediately filtered and cooled in the dairy. The filtration is done through linen cloths, which are boiled each time after being used; the cooling is done by the aid of a cooling apparatus. By this careful method of collecting the milk, its filtration through boiled and clean linen cloths has proved sufficient. This is a very simple and inexpensive method. Filtering apparatuses,

if the filter is not carefully cleaned—by steam—are very good harbors for dirt and bacilli. The filtering cloths, on the contrary, easily can be kept clean and sterile by thorough boiling. The cooling machine is a square zinc-plate box, whose broad front, back and sides are made of tin. Through openings made in the narrow side-walls a stream of cold water flows down on the inside and flows out again through openings in the opposite side. The milk flows through a cooled interior, and has its outflow in a receptacle placed below. The spaces between the separate indentations are very small, so that the milk can not flow off too rapidly, as part of it is retained through its capillarity. In this way the slowly-flowing milk is cooled by passing over a large area. The cool water flows from a deep well and may be cooled still further by passing through an ice-box. The cooled milk at the time of the delivery has a temperature of 10 C. The transportation utensils —milk cans—in which the milk is transmitted to the hospital, are made of galvanized tin, and can be opened to ensure thorough cleaning. If the cans can not be cleaned immediately after the milk has been emptied they are filled with water, as dried milk residues are very hard to remove and might be overlooked. Milk is obtained three times daily, and sent three times to the hospital. It is strictly forbidden to deliver milk which has stood some time. (See article on "Milk Control.")

In the hospital the milk is received by a maid especially employed for this purpose, who has no other duties but the storing and sterilizing of milk and attending to all duties pertaining thereto. She is especially instructed regarding her duties, and the fact is made clear to her that the life and health of the children depend on the careful and strict fulfilment of her duties. She must therefore see that her body is kept absolutely clean. Her uniform consists of a wash dress and a large white apron, covering the entire body. Before beginning her work she must cleanse her hands with a brush, soap and lukewarm water. The dairymaid inspects the cans as to their cleanliness on receiving them and tests the temperature of the milk. Irregularities, such as the non-delivery at the stated times, poor measure, improper cleaning of cans, wrong temperature of the milk, etc., must be immediately reported to the chemist of the institution, who has this under his control. The delivered milk is utilized at once. The milk for the use of the house and the older children is cooked in copper vessels, then put into clean receptacles and into the ice-box, because it is not immediately sent to the hospital. The milk for infants, which is either full milk or a milk mixture, with hot-water or oatmeal gruel, according to the prescription of the physician, is put into bottles and sterilized.

The greatest stress is laid on the absolute cleanliness of the bottles. These are put into hot soda-water, washed with a bent-handled brush, and cleansed of any particles of milk which may have adhered; they are then placed in a specially constructed rinsing machine connected with flowing water, and rinsed with coarse sand, then with clear flowing water, and finally washed again with sterile water. The empty bottles from the infectious wards are first put through a disinfecting process in a large disinfector of the hospital, and are kept in steam for thirty-five minutes at a temperature of 104 C. The bottles are graduated in cubic centimeters and are made after my own model, in sizes of 300, 200 and 100 c.c. After the bottles are filled, a plug of cotton is inserted in each, and after being sterilized in like manner, are sent to the different wards. As the milk is carried in baskets, it is unnecessary to have any other stoppers.

The sterilizing is done after the Soxhlet method in a Henneberg milk-sterilizer, which holds 264 bottles; for extra use there is a reserve apparatus after the Autoclave method, consisting of a large copper cylinder, having steam connection, in which two frames, each containing 32 bottles can be placed. The cylinder can then be made air-tight. The Henneberg sterilizer consists of a forged iron cabinet resting on legs, which has an air-tight door in front. On the inside of the cabinet there are movable grates, as a protection for the bottle-holders. The steam flows into this cabinet by means of a very fine pipe through the bottom, surrounds the milk bottles and replaces the specifically heavy air which is carried out by means of a second pipe in the bottom, into a chimney and out into the open air. The machine is, furthermore, supplied with an air valve for quickly removing the steam after the sterilizing is finished; a safety pipe to prevent too great pressure, and also with a thermometer. The temperature can be raised to 105 C. We sterilize at 100-101 C., and after the temperature reaches 100 C. the milk remains in the sterilizer thirty minutes.

The criticisms which have recently been made against the strict sterilization of milk I can not approve. I have never seen any harm arising from the use of fresh sterilized milk, and I believe that those authors who declare that sterilized milk causes Barlow's disease, really mean that the prolonged use of sterilized milk, procured from public milk-sterilizing laboratories, which frequently have a large stock of sterilized milk remaining on hand for possibly several months before being used, has unquestionably produced Barlow's disease. Even if it be admitted that the sterilization of milk for the feeding of children is combined with disadvantages, one can hardly use any other than sterilized milk in a children's hospital. In young children, with a tendency to intestinal disease, the danger of infection by means of bacteria existing in the milk is very great. We have every reason to be satisfied thus far with the sterilization used in our hospital.

Regarding the dilution of milk and its use in the varying dilutions, I can hardly see how we can do without this for sick children, notwithstanding the fact that French physicians have recently advocated the use of full milk. I am convinced that pure milk does not agree with dyspeptic children in the hospital, and as often as I have tried this, even with small, measured quantities of pure milk to nourish severe cases of dyspepsia, I have been forced to stop on account of the reappearance of vomiting and increase of diarrhea. I therefore can not dispense with the diluting of the milk. Numerous additional substances used in the diluting, such as water, gruel, rice-gruel, barley-gruel, etc., I hold to be absolutely necessary in diarrheal diseases. I see no reason for doing away with our present methods.

Suture in Tiers Without Buried Threads.—The silk thread or silver wire is passed through the deepest tier of tissues for one stitch. The ends are then drawn and held tight with forceps. A piece of No. 3 catgut is then passed around the thread below the forceps and tied in three tight knots. The upper tiers are then sutured together in the same manner, with the ends of the thread emerging from the deep tier and tied around the catgut close to each tier of tissues. Each stitch is thus directly above the one beneath. This method was exhibited by Hagopoff at the International Medical Congress for the first time.

THE RELATIVE VALUE OF HOMATROPIN AS A CYCLOPLEGIC: A CLINICAL STUDY.*

E. C. ELLETT, M.D.

Ophthalmic and Aural Surgeon to St. Joseph's Hospital, City Hospital, Lucy Brinkley Hospital, Children's Home, Shelby County Poor and Insane Asylum and Leath Orphan Asylum.

MEMPHIS, TENN.

The question of the value of homatropin as a cycloplegic was brought before the Section last year by Dr. Culver; nevertheless I believe we can profitably discuss it again. On account of the short time required for the effect of homatropin to pass off, it is a cycloplegic much to be desired provided it is effective, and this is a matter in regard to which opinions vary. I am a firm believer in the necessity of using a cycloplegic for measuring the refraction if we desire to do work which will be lasting in its effects and which will reflect credit upon us in its results, though I am aware that there are many men whose opinions carry much weight who seem content with the results obtained by estimating and correcting the dynamic refraction. I take it, however, that we can dispense with any arguments as to why we are interested in the subject of cycloplegics and why we habitually use them. Suffice it to say that most of us are satisfied from clinical experience that they are not only justified, but demanded, and that we do use them for two purposes: 1. To obtain complete rest for the eyes, and thus relieve choroidal congestion and low-grade inflammatory processes in the deep tissues of the eye. 2. For the purpose of accurately measuring the errors of refraction. While we may not agree as to the theoretical indications for the use of a cycloplegic, I believe that when practically confronted by a patient, the majority of us would be of one mind as to whether or not to use such a drug in that particular individual.

Atropin, the best cycloplegic we possess, in the vast majority of cases produces complete cycloplegia, which lasts sufficiently long to give the eye a thorough rest and permits of several examinations on different days. With homatropin, the most fleeting of cycloplegics in its effects, we are usually compelled to be content with one examination, and, as ordinarily used, the rest it affords is so short as to have little or no therapeutic virtue. Various drugs stand between these, viz., scopolamin, hyoscyamin and duboisin, the last two at least being chemical accidents, and may be looked upon as modified atropin. The question with which this paper has to do is: Does homatropin produce a sufficient effect on the ciliary muscle to be a reliable agent, and if so, in what manner and in what dose is it best to use it?

The fact that so many persons can not afford the time necessary for the use of atropin compels the use of a more quickly acting drug. I began using homatropin hydrobromate in solution and tried it in the strength of 8 and 16 grains to the ounce, instilling one drop every five or ten minutes for an hour. I finally settled on a solution of 12 grains to the ounce as giving, as I thought, satisfactory cycloplegia with a minimum of risk of constitutional effects. This solution is irritating, producing conjunctival and ciliary injection, to avoid which I preceded it by a drop of 4 per cent. cocain solution. I used this solution when I could not use atropin, with tolerable satisfaction for about four years, and then I began the use of the discs of homatropin and cocain, prepared after the formula of our colleague, Dr. Casey Wood. Each disc contains 1/50 of a grain each of homatropin and cocain (alkaloids). My method of use is the same as that proposed by Dr. Wood, and is as follows: First, a drop of cocain solution is instilled for its anesthetic effects, as the use of the disc is somewhat painful. Then the patient is directed to look down, and the disc, carried on the end of a cotton-tipped applicator, is placed on the conjunctiva above the cornea, and the eye closed before any winking can occur, which might expel the disc, and the handkerchief is placed over the eye. In the same way, a disc is placed in the other eye and the patient keeps both eyes closed. A second and then a third disc is introduced into each eye at the end of thirty and sixty minutes, respectively, and thirty minutes after the last one is applied the patient is ready for the test. In testing the refraction my reliance is placed chiefly on the test lenses and the shadow test. Many eyes thus treated will be found to present, at the end of ninety minutes, considerable irritation, with both conjunctival and deep ciliary injection. This may be relieved by instilling another drop of cocain solution.

Comparative studies have been made to ascertain the relative efficiency of the different cycloplegics, especially comparing homatropin and atropin. I might refer to those of Wood, Coleman, Starky, Jackson, Oliver and Risley, as indicating that while in many, nay most, cases the efficiency of homatropin has been proved, in a respectable number atropin reveals the more hyperopia, and sometimes more astigmatism and sometimes a change in the axis of the astigmatism.

It may not be amiss to refer to the reasons which Dr. Wood has advanced for using the drug in connection with cocain, in a gelatin disc and in this dose. He believes[1] when homatropin in aqueous solution is dropped into the eye, 90 per cent. of it escapes by the tear passages or over the cheek. When applied in ordinary solution, they dim the cornea while the gelatin is completely absorbed and yields the drug slowly. The addition of cocain increases the absorptive power of the corneal epithelium, and the disc of most useful size will contain only 1/25 of a grain of an alkaloid. Further, the method of keeping the eye closed is a protection to the corneal epithelium from the deleterious effect of cocain. This disturbance of the epithelium is urged as an argument against the use of the combination, by Thorington,[2] but I have searched carefully with oblique illumination and the loupe, and have failed to detect its presence. I would further suggest that closing the eyes prevents expulsion of the disc from the conjunctival sac, and intensifies the cycloplegic action of the drug by removing incentives to the exercise of the accommodation, and by excluding the light.

Aside from the vulnerability of the particular ciliary muscle, the question of the efficacy of homatropin seems to me to depend largely on the methods of its use and the dose. The discs as indicated, furnish a means of applying the homatropin almost continually for ninety minutes. Jackson[3] says that we can not rely on single or hourly instillations—referring to solutions—but must use them at intervals of a few minutes. He uses a solution of 12 grains to the ounce. With many of those who have gone on record as finding homatropin unsatisfactory, we can see the reason in their method of its use. This is certainly true in the case of Holt,[4] who used a 3 per cent. solution nine times in sixteen

*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

1 Trans. Pan-American Medical Congress, 1893.
2 Refraction and How to Refract.
3 Trans. American Oph. Soc., 1889.
4 Ibid.

hours, and hourly for four hours before the examination. Coleman,[3] however, was dissatisfied with the results, after using all sorts of solutions and discs. In looking over Coleman's table, the difference, where difference exists, is in most cases slight compared to the total error, and can not be laid wholly to the door of ineffectual cycloplegia until the personal equation of both tester and tested can be eliminated.

I will present here in tabular form the results in some cases which I have had the opportunity of examining, first under homatropin, and later under atropin. These observations are clinical, not experimental, and represent cases in which the correction prescribed under homatropin was for some reason unsatisfactory. They are not selected cases, and are, moreover, made on eyes suffering from eye-strain. It would appear that such observations have value, for we use cycloplegics on such eyes in more instances than we do in eyes not so affected, and the object of the study should be to determine the relative value of the cycloplegics on pathologic eyes. The only fact that detracts from the value of the table is that the second examination was made several months after the first, and it is possible that in a few instances a real change in the static refraction may have occurred. The results are those obtained by the test lenses, all the cases being private patients and all tested as carefully as I know how.

Case.	Homatropin and Cocain.	Atropin.	Case.	Homatropin and Cocain.	Atropin.
1	+ .25	+ .50	27	Em.	+ .50
2	Em.	+ .25	28	+ .25	+1.00
3	+ .50	+1.00	29	— .25	— .25
4	Em.	+ .25	30	— .25	— .75
5	+ .50	+ .50	31	— .25	— .25
6	+ .75	+1.00*	32	—1.25	—1.00
7	+ .25	+ .75	33	+1.50	+1.25
8	+ .25	+1.25*	34	+1.75	+1.75
9	+ .75	+1.00	35	+1.50	+1.75
10	+1.50	+1.75	36	+1.75	+2.25
11	+1.00	+1.75	37	+1.50	+1.75
12	+1.50	+2.00	38	+2.00	+2.25
13	+1.50	+1.50	39	+1.50	+2.00
14	+2.00	+2.00	40	+2.00	+2.50
15	+1.50	+2.00	41	+1.00	+1.50
16	+1.25	+2.00	42	+1.50	+2.00
17	Em.	— .50†	43	+3.00	+3.50
18	+ .50	Em.†	44	+3.50	+3.50
19	Em.	Em.	45	+2.50	+2.50
20	+ .50	+ .50	46	+3.50	+3.50
21	—2.00	—1.00	47	+2.75	+3.00
22	+2.00	+4.00	48	+3.50	+3.50
23	—1.00	Em.	49	+ .75	+1.00
24	+1.50	+3.50	50	+ .75	+1.00
25	+ .25	+ .50	51	+ .75	+1.25
26	+ .75	+1.25	52	+ .75	+1.25

* Obstinate case, prolonged atropin.
† One year between tests.

In 52 observations the following results are noticed: Gains for atropin were .25 D. 14 times; .50 D. 14 times; .75 D. 3 times; 1.00 D. 3 times; 2.00 D. 2 times; total 36; average gain .54; results identical 12 times. Homatropin gains were .50 D. 3 times; .25 D. 1 time; average gain for homatropin .44. Average gain for atropin in 52 observations (meridians) .385.

In two of the cases showing a gain for atropin of 1 D., and in the two cases showing a gain of 2 D. the first examination was made with homatropin in solution, the second with atropin about three or four years later. It is hardly fair to compare the two drugs in this way. In addition to these differences, I have noted the following changes in the cylinder[6] axis; 5° once, 15° three times, 30° once, 60° once.

The results shown in the table are not what I thought they would be. Homatropin has been most effective in aiding in the selection of glasses, which have proved satisfactory after glasses prescribed without cycloplegia both by myself and by others have failed to do so. If the four observations to which I alluded be eliminated, we find a variation so slight that it will hardly affect the clinical result. I have noticed that in many cases tested with homatropin the shadow-test will indicate a glass .25 or .50 D. stronger than that which gives the best vision. As regards the cylinder axis I am not prepared to say that this is altogether due to more efficient cycloplegia, as the tests in most of these cases was made on individuals and under circumstances which made accuracy difficult to obtain.

The principal practical objection which I have to homatropin and cocain discs is the pain they cause, this being especially objectionable in children. I have demonstrated to my satisfaction in the same patient the superiority of discs to the solutions, and am not disposed to return to the use of the latter.

I may summarize as follows the conclusions which seem justified:

1. The necessity of cycloplegia in order to *accurately* test the refraction of young people is established, though *satisfactory* fitting can doubtless often be done without it. (Note the distinction between accurate and satisfactory.)

2. Atropin is, all things considered, the most reliable cycloplegic, but a great objection to its use is the length of time consumed.

3. For testing the average case, without much chorioretinal irritation or marked ciliary spasm, homatropin, properly used, is sufficient.

4. The best method is that of the homatropin and cocain discs, made after the formula and used after the method of Dr. Casey Wood.

5. In many cases atropin must be used, to relieve spasm, to procure rest and thus to allay chorioretinal irritation. In these cases the patient can no more justly object to its use than he can to its being used in iritis. In both cases his time and his business interests are secondary to the ultimate attainment of useful vision.

DISCUSSION.

DR. C. M. CULVER, Albany—Ever since studying with Dr. Nettleship, in Moorfield Hospital in 1881, I have considered that what has been said may be taken for granted, that the most complete cycloplegia is obtained by the long-continued use of atropin sulphate; but we must meet conditions that so often present themselves in practice where patients come without any premonition of long-continued treatment and expecting an optical prescription in a relatively short time. In using the atropin sulphate for determining refractive errors, I use it exactly as I do homatropin, that is, by the instillation of a few drops at intervals of five minutes until six instillations have been made, and then waiting until an hour, from the time of the first instillation, has elapsed. The comparisons that I have made show that in no practical way is the atropin sulphate superior. It still seems as if, in actual practice, a 1 to 40 solution of homatropin is that most useful. The transient action is desirable from one view-point and undesirable from another. While for a long time I used the disks, which seemed quite useful, there seemed to result from this use a roughening of the corneal epithelium that detracted from the accuracy of the optical examination and, contrary to the experience of Dr. Ellett, I came back to the solution which, comparatively, seemed to me to be the more effective.

DR. CASEY A. WOOD, Chicago—After the discussion of this subject, both this and last year, I am sure I would be taking up your time unnecessarily if I were to repeat what I said on former occasions; but, if you will permit me, I wish to say that I still use the preparations for which I am responsible, and still believe that where we are unable to use atropin some such combination as I have recommended is desirable. It is, however, like a sharp instrument—good when properly employed, and harmful when not properly used. It must be in-

5 Annal Oph. and Otol. January, 1893.
6 The cylinder in each of these cases was a .25 D.

sisted on that when the disks are placed in the eye the latter must be closed, for if the eye be left open for any length of time the anterior epithelium of the cornea becomes dry and may interfere with the subsequent measurement of the refraction. When the lids are closed this loosening of the epithelium by the cocain allows of the rapid absorption of the homatropin, and is the agent that brings about cycloplegia.

Dr. Ellett referred to the use of the disks in children. I have lately discontinued their use for this purpose, chiefly because children's time is not, as a rule, of much importance, and I generally insist on the use of atropin; but when business men and women come to us and say, "I have a half-holiday on Saturday and must get to work on Monday," we have no choice. I believe it is better to use cocain and homatropin than to try to insist on the use of atropin, even though the latter drug may be thought preferable. In my experience I find it wise to tell the patient that if the disks are not satisfactory atropin or scopolamin *must* be used. There is an important fact to be borne in mind when making studies of the comparative value of cycloplegics. If one makes a second examination within a short time, no matter with what cycloplegic, there will often be found a difference in the refraction. I made a number of tests with this result some years ago, using atropin alone and waiting for ten days after the first to make the second examination. Not uncommonly, a greater amount of hypermetropia, or hypermetropic astigmatism, and a smaller amount of myopia, was discovered on the second trial, and the same was found in the case of homatropin and cocain. To arrive at proper conclusions, therefore, I am persuaded that at least a month must elapse between the two examinations.

DR. A. D. MCCONACHIE, Baltimore—While I endorse entirely all that has been said in favor of homatropin, I want to report some unfavorable experiences with it. I reported two cases in the *Philadelphia Medical Journal* a year and a half ago under the title "Two Cases of Homatropin Intoxication or Substitution, Which?" I thought the cases either idiosyncrasy or substitution. Further evidence by experiment and observation proved that the patients had not gotten homatropin. My usual prescription for homatropin is ½ gr. of the salt to ½ dram of distilled water, with directions to put 2 drops in each eye every ten minutes for six instillations; that means twenty-four drops of an 8-gr. to the ounce solution. After I had criticised the pharmacist, an investigation was taken up by our state pharmaceutical association, and I was arraigned for considering it substitution and dealing wrongfully with them. One of our ablest pharmaceutical chemists, however, examined the specimen, which, by the way, bore Merck's label, and found that it was not pure homatropin, but some salt allied to atropin. Merck, when consulted, said that it should only be used in .5 per cent. solution, and that I had used a solution strong enough to be poisonous—yet my solution is but half the strength recommended here. I was vindicated before the society by a pharmacist, however, and they admitted that there was substitution perhaps, not by the druggist, but by accident, and that some other drug had gotten into the bottle.

My object in referring to these cases is to impress the members of the profession of the dangers attending the use of homatropin of uncertain composition.

DR. F. C. HOTZ, Chicago—I think there can be no difference of opinion among us that homatropin, on account of its transient effect, is a valuable remedy. The question narrows itself down to whether homatropin is reliable in refraction work, because the majority of our patients who present themselves for refraction examinations have healthy eyes. I agree with the essayist in so far as I consider homatropin a reliable cycloplegic in the majority of cases. There are cases in which you may fail and have to resort to atropin. I have not made any comparative tests by using homatropin and following that in a few weeks by a second test under atropin, but I have had, in the course of a few years, a number of patients who returned for a second examination, and inasmuch as the first examination was made under homatropin, I decided then to examine them under atropin. I regret I have not had the time to go over my records to select a number of these cases, but as far as I can remember, many of the examinations showed the same results. In regard to the method of applying the remedy, I think to instill it every five minutes is a waste of homatropin. I use a drop of 2 per cent. cocain solution, and five minutes later a second 2 per cent. solution of homatropin. Fifteen minutes later a second application is made, and in 30 or 40 minutes after the first application I find the accommodation practically suspended and the eyes not irritated.

DR. J. L. THOMPSON, Indianapolis—I have had some experience with homatropin ever since it came out. At first I used the salt on the end of a probe, and afterward the disks. I always re-examine my patients whenever I can, about two years after the first test. In the great majority in which I used homatropin I find, under scopolamin or atropin, that I had not gotten out the full degree of the anomaly that existed, but occasionally you find a case where one or two applications of homatropin has been just as effective as atropin. Then, again, I have found that occasionally atropin does not bring out the full degree that exists. Duboisin I find the most reliable of all, and generally it makes the patient sick at the stomach. In about one-half of the cases in which I used homatropin I believe the full amount of correction was not brought out. Scopolamin has suited me a great deal better.

DR. WILLIAM THOMSON, Philadelphia—I think it would be better if each gentleman would explain to us the methods he uses to determine whether he has obtained a full degree of cycloplegia. My method of detecting it is to make an artificial far point by the use of a 3 D. lens, with small type for test.

DR. W. L. PYLE, Philadelphia—I do not think the argument that a subsequent examination under atropin will bring out more defect is valid, for I have often made examinations under homatropin and cocain after a lapse of eighteen months or two years from the tests under homatropin, and even atropin, and found quite as much increase in refractive error as these gentlemen report after using atropin following homatropin.

DR. S. D. RILEY, Philadelphia—I wish simply to urge the importance of using the mydriatics for their therapeutic value, even in correcting errors of refraction. Some one, in this discussion, made the remark that the majority of refraction cases coming to him presented healthy eyes. I must say this is not in accord with my own experience. A large number of my patients have fluffy choroids, headaches, etc. I feel sure that no rapid method will meet satisfactorily the requirements in these cases. The time limit is an important one, and if we use homatropin it should be for many days, until the hyperemia of the fundus has disappeared and the attending asthenopia symptoms have subsided. Until this is accomplished no certain correction can be made.

Neither subjective nor objective methods suffice to determine accurately the static refraction of such eyes when in a state of health. I prefer in these cases to use the more vigorous mydriatics, and the one I prefer above all others is the hyoscyamin sulphate, for it holds the accommodation in its grip more firmly than atropin and it subsides many days sooner—provided you get hyoscyamin. It is difficult to secure a trustworthy preparation, because in its manufacture too great heat or excess of alkali converts it into atropin. The only way to differentiate between them is by polarization. A chemist can not tell which is which in the laboratory, for they are isometric.

The strong mydriatics, if kept in a sufficient length of time, i. e., until the irritation subsides, permit the accurate and easy correction of any existing error of refraction to be made, but this can not, in my judgment, be done until that point is secured. I therefore insist upon the use of a mydriatic for its therapeutic value as well as its cycloplegic effects.

DR. E. C. ELLETT—In regard to Dr. McConachie's experience with poisoning by homatropin, I have noticed it twice in using solutions, but not at all in using the disks. These two patients were young ladies of the same age, and resembled each other strongly in appearance. About the irritation of homatropin, which Dr. Hotz thinks he avoids by preceding it with cocain, I have seen the same irritation produced by the disks, and relieved by cocain.

As regards determining when we have cycloplegia, I have used the same method Dr. Thomson suggested. I generally use a + 4 D. lens and then test with J.1, which is small enough

to give a very short range of vision, and if there is any latitude at all I conclude that cycloplegia is not sufficient. I think where we wait for a year or more and then retest our cases an increase in the strength of the glasses may be indicated from the fact that the patient has worn glasses for that long, and that there has been a small amount of hypermetropia concealed by ciliary muscle tone or action that could not be overcome by the cycloplegic. I fully agree with what Dr. Risley has said with regard to the use of mydriatics in these cases of deep irritation. I said in the paper that one of the uses of these drugs is to procure rest, and mydriatics are as much indicated in certain cases of eye-strain as in iritis, and can not be replaced by any other substance.

SOME FACTS ABOUT APPENDICITIS. MEDICAL AND SURGICAL.*

J. H. CARSTENS, M.D.,

DETROIT, MICH.

Experienced surgeons make the statement that if they should have 100 consecutive cases of appendicitis and should operate on all of them as soon as the diagnosis was made, they could show a better list of perfect recoveries and a smaller death-rate than if 100 similar cases were treated on the expectant plan and those only operated on which were finally selected by conservative practitioners. I agree with the above statement, but not with the assertion of the ultra-conservative members of the profession when they say that the radical surgeons insist that every patient should be operated on immediately. I never heard a surgeon say so. Surgeons say that it would be better if every case could be operated on, but every careful surgeon selects the time and method of operation in each case. And each case varies. Even if we say that every case ought to be operated on, that does not mean that we recklessly rush in and operate without due consideration of the condition of the patient, the environment and the necessary treatment. We are called to consult in a case in which the patient has been ill for several days, and on our arrival at the house we find a decided change for the better has taken place. We see that the turning-point has been reached and that the patient is going to recover. Does any one operate under such circumstances? I know of none. We say that when the acute symptoms subside, and if the patient has had similar attacks before, we can operate in a few weeks. If, however, we see the patient during a first mild attack, then we suggest that the patient wait, since we know that about 15 per cent. never have a recurrence. But should there be another attack, we advise an operation. Many advocate waiting until firm adhesions have taken place. This has never seemed right to me. It can be justified only when one expects to get one of those very large, appendicular abscesses containing a pint or more of pus, with the sloughed-off appendix floating in it. Such cases simply require an opening of the abscess and drainage; but before one case reaches that stage fifty cases, at least, would end in death.

Furthermore, if the adhesions are firm—which is very good in "let-alone" cases, but a very troublesome condition when you have to break up the adhesions and remove the appendix—you are liable to strip up the peritoneal covering of the intestines.

Another idea which seems to me very objectionable, is that waiting in such cases is a good thing. "Wait until the power of resistance of the individual has been developed." When has it reached its acme? There is a limit to nature's power of resistance and I think this power as a rule is greatest in every case, when the disease has existed the shortest length of time. This brings us to a consideration of phagocytosis and leucocytosis—the power of resisting and eliminating microbe infection. As the infection becomes greater, nature offers more barriers to the onslaught, but a limit is reached in these cases also, and nobody can make me believe that a person who has been subject to a septic condition for five days is a better case for operation than one who has been subject to septic infection for two days, neither can any one make me believe that ten, fifteen or twenty days after the microbic infection, when all the reserve powers of the system have been exhausted, is a better time to operate on the patient than in the first twenty-four or forty-eight hours. It is so unreasonable, so opposed to all ordinary laws of health and to common sense that I have always rejected the idea.

There is a class of cases in which the surroundings are not conducive to aseptic surgery. We sometimes hear in medical societies, or even read in medical journals, of wonderful operations, performed in the little hovel or flat, where whole families were cooking, sleeping, eating and living in one room. We hear of these most wonderful recoveries under the most adverse circumstances, but we never hear of the thousands of deaths following operations under similar conditions. In those cases in which the environment and the after-care are bad, it seems to me that the surgeon ought to trust more to nature than to surgical skill, which will be nullified by the ignorance of the nurses in whose charge he leaves the patient.

Accurate statistics, furnished by surgeons, show one side of the question, but it is very difficult to get statistics of cases—recoveries and results—from general practitioners. It is almost impossible for the general practitioner to keep statistics if he wants to. When he attempts to write out his records, he is disturbed and must rush away, and so it goes on every day. He is tired out at night and can not sit down and write for an hour or two. But occasionally, a person can take pains in one particular branch. I would like to see a hundred general practitioners keep accurate records of appendicitis, say for a year or two, and then report them. They ought to have the age of the patient, the number of attacks, the line of treatment pursued, and the final results. Then we might come to some conclusion on the medical side of the question.

The kind of microbes, it seems to me, has little to do with the severity. We know in all cases the bacillus coli communis is found, which gives us cases with low temperature, and very deceiving cases on that account, as they are jogged along by the general practitioner for a week or ten days when suddenly leakage takes place into the peritoneal cavity and when the surgeon arrives the patient is beyond help. Cases with mixed infection of bacillus coli communis and staphylococcus pyogenes aureus have a very high temperature and rapid pulse. These are cases that frighten the general practitioner and induce him to call in a surgeon in time. I have also found cases where the appendix had not ruptured and the peritoneal fluid contained staphylococcus albus only, but with the most severe symptoms. How they get there I do not know. We also find bacillus or diplococcus fetidus and many other kinds, so that all around it seems to me that the variety of bacteria or germs has little to do with the severity of the case or the danger to the patient.

* Read before the Allen County Medical Society, Fort Wayne, March 20, 1899.

Sometimes an appendix is removed, especially during the interval, which does not seem to be diseased macroscopically; the patient, nevertheless, gives a clear account of having had repeated attacks. If, however, a microscopic examination be made, you will find that the appendix is ulcerated, strictured, etc., and what is better proof, the patient becomes well afterward. Repeated attacks in the same individual vary very much. The first attack may be very light or severe, the second or third may be light or severe, or either of them severe. We can never tell. Many patients are what I call chronic invalids, simply from repeated attacks of appendicitis and the resulting sequelæ.

I think there is no medical treatment that is specific. I think ice or hot applications, or painting with iodin or anything else, are of little value. I do not believe in opium, and still, if the patient is in pain an occasional dose is indicated. Starving the patient, as has been suggested by Ochsner, is certainly efficacious, but does not cure the case; they will have recurrences and require operations.

The diagnosis is generally easy, if the physicians will only look for appendicitis, although the first day the symptoms may point to the stomach on account of the vomiting, or to the bowels on account of the constipation or diarrhea, but after that the well-marked pain in the region of the appendix and the rigidity of the muscles over that part is so clear that a mistake is seldom made. I have operated on cases where I found a malignant growth or a perforation of the bowels, but the mistake was not serious, as this kind of cases equally requires surgical intervention. Morris and Richardson have recorded a large number of cases that show a mistake is made in 3 or 4 per cent. I am perfectly satisfied that I do not make a mistake any oftener and I think every general practitioner in the course of his practice is a splendid diagnostician if he does not make more than this.

The tumor develops as the result of plastic exudate, which walls in the appendix. The appendix becomes attached to the side or the back of the pelvis and finally ruptures, still being well walled in. It sometimes ulcerates through the peritoneum at the side or the back, and the pus works its way upward toward the crest of the ilium, or behind it below the kidney, where it breaks or is opened. These are exceptional cases, patients with the peculiar power of the peritoneum to throw out fibrous exudate, layer over layer, and prevent the rupture into the peritoneal cavity. In fact, the whole question of medical treatment, it seems to me, depends on the health of the individual, especially on his power to throw out the plastic exudate of the peritoneum, and I think that our surgical success depends on the same power. If we operate carefully, restrict contamination of intestines and peritoneum to a minimum, remove the pus, and put in a drain, in a few hours the cavity or the opening we have made is surrounded by plastic lymph and well walled in, and our patient recovers. If, however, the patient's peritoneal secretion is thin and does not coagulate, the bacterial infection is spread all over the peritoneum and we have general septic peritonitis.

I looked over the death record of the city of Detroit for 1899 and I found that 37 cases are put down as having died from appendicitis. There are 54 put down as dying from peritonitis, and though some of the latter cases may be due to pelvic diseases, I am sure that more than half are due to appendicitis, treated with poultices and opium, and finally disposed of with a pious exclamation, "The Lord's will be done."

The death records of these 37 patients were signed by 19 different physicians, and I thought by inquiring from them I might be able to arrive at some kind of conclusion. I received answers from 12, who reported on 25 deaths. Fourteen of these cases had been subjected to operation and eleven others died without any operative interference. As the members of the medical profession who had signed these certificates had been able to properly diagnosticate the cases, and were first-class men in good standing, I thought I might also get further information from them and asked them to give me the number of cases they had had during the year, and how many died with or without an operation. I received reports of 213 cases of appendicitis. Of these, 160 were operated on during the acute attack or during the interval, in fact, at any time when the surgeon thought it was proper. Of these 160 cases, 14 died. This list of surgical cases includes naturally the reports of the principal surgeons and gives a death-rate of about 8 per cent., counting everything—easy interval cases, severe cases, purulent peritonitis, and those actually moribund. The number of cases not operated on, that is, medically treated, were 57, with 11 deaths, giving a mortality of over 20 per cent. From the reports of the physicians in nearly every case, the operation had been urged, but refused by the parents of the patient, or by the patient himself.

I do not want to place these figures forward as positive proof of the result of one line of treatment over the other, because the number is limited. Still, taking them up at random from men who know how to diagnosticate appendicitis, they certainly must be very near the truth. We certainly can not accept the figures of those who do not know what appendicitis is, never diagnose it, and never have a death from it. We must take our statistics from men who are able and progressive and who keep a record of the number of cases; so many were operated on; so many were not operated on; so many died following an operation; so many died without an operation." These statistics from such men must certainly be very near the truth. I would like to have a larger list, but as stated above, one can not expect general practitioners to keep the statistics of all kinds of diseases.

This proves that cases of appendicitis die under medical treatment. This is often denied. I have here the proofs. If I should hunt up all the cases which were put down as peritonitis in the death record, and get the report of them, I feel quite sure that I would increase the above-given record of death of medically treated cases of appendicitis 50 per cent., if not 100 per cent. The general average given by nearly all surgeons is that at least 15 per cent. of appendicitis cases die; 15 per cent. never have a recurrence after the first attack, and about 60 per cent. have recurrences and die off, one by one, at the rate of 15 per cent., unless relieved of their appendices. In conclusion I desire to make the following points:

1. It ought to be a general rule that every case of appendicitis should be operated on as soon as the diagnosis is made, but when it is the first attack and very mild, or no proper facilities are at hand either to perform the operation or to take care of the patient afterward, it is often good policy to wait and watch the case.

2. In cases of second or subsequent attacks, however, the patient should be sent to a hospital, even though it is at quite a distance—unless good facilities can be had at home—and an operation promptly performed.

3. Statistics of cases operated on as they come along,

good, bad and indifferent, by experienced surgeons, give a mortality of only 8 per cent.

4. Statistics collected by general practitioners who are able and up to date, and who advocate surgical interference, show that medically treated cases have a death-rate of at least 15 to 20 per cent.; that at least 60 per cent have recurrences; while the cases operated on are absolutely cured.

IMPROVED LANTERN FOR TESTING COLOR PERCEPTION.*

CHARLES H. WILLIAMS, M.D.
BOSTON.

This lantern is an improved form of the one I showed at the meeting of this Section last year. It puts in more practical form the principle which has for many years been carried out on the railroads of Holland, where a color-test both by worsted and a lantern, of more complicated construction, is required. The lamp is arranged with two burners, and in the front of the lantern are two openings so that two colors can be shown at one time, as red and green, two reds, or two greens of different shades, a red and white, etc. In this way a comparison of signal colors can be had, as is often the case in service; or, by moving a diaphragm one light can be cut off, and only one color at a time is then seen. There are thirteen colored glasses, and variations of intensity of color are arranged by a difference in the shades of the colored glasses and by combining them with smoked glasses placed in another disk. Also, the size of the colored area can be varied by a diaphragm moving between the disks.

The lantern is square in shape, about a foot high and six inches on each face. On its front are two revolving disks. The lower carries thirteen glasses, five reds and five greens of different shades, including a red glass that with the spectroscope is seen to transmit a certain amount of green light in addition to the red, and a green glass that transmits a certain amount of red in addition to the green, although not enough in either case to interfere with the general color of the red or green glass when seen by a normal eye. Such glass is often found in signal lanterns, and if a person is defective in his color perception for red and green there is more chance of his mistaking the color of such signals than when the glass transmits light of a purer shade. In addition to reds and greens, this disk carries one yellow, one blue and one colorless glass. The upper disk has several empty spaces and three different shades of smoked glass, and any of these can be combined with any of the glasses of the lower disk to give a variation in the intensity of color. Between the disks is a movable diaphragm arranged so that colored areas of three different sizes can be shown, or so that one light can be completely cut off.

Inside the lantern are two movable pieces of ground glass, which can be put in the path of the light or withdrawn, and the combination of these ground glasses gives very much the same effect as is produced by fog and smoke on the appearance of the colored signal lights. The darker smoked glass should not be used with the smallest opening of the diaphragm, for it will reduce the light too much, but with the larger openings any of the glasses may be used. With each colored glass is an illuminated number, and with each smoked glass a letter, illuminated by the lamp of the lantern, so that the examiner can see it, but screened from the person being examined. In this way it is easy to keep a record of the color shown in every case, together with the name given to it by the person tested. This lantern test is easy to make either by day or night, a darkened room

being used by day. These colors do not fade. They resemble very closely the colors and appearance of signals in actual use; and will detect small defects of color perception in the central portion of the retina that may be entirely overlooked by the worsted test.

During the past year I have had four cases who passed the Holmgren test without difficulty but who made so many mistakes with the reds and greens of the lantern as to show that they were unable to distinguish correctly the true colors of signal lights seen at the usual distances. One of these cases who had been twice exam-

*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

ined with the colored worsteds and passed as having satisfactory color perception made the following mistakes with the lantern: No. 2 (green) he called red; No. 4 (green) he called red; No. 5 (red) he called yellow; No. 8 (red) he called green; No. 9 (green) he called red; No. 10 (green) he called red; No. 12 (green) he called red; and No. 13 (white) he called red. On testing him in my office he made some of the characteristic mistakes with the colored worsteds, but his former examiner had passed him, and I do not think this mistake would have been made if the lantern test had been used in addition to the worsteds.

The lantern gives some information that we do not get with the worsted test, especially in regard to small defects in the central portion of the retina, in regard to the recognition of signal colors when affected by fog or smoke, and in regard to the ability to give correctly the proper name to the color shown. On the other hand, the test with the colored worsteds, in which the colors are selected by comparison with certain test colors, as proposed by Professor Holmgren, and which when properly made is a true test by comparison of colors in which no names are used, gives some information that the lantern does not give. Both tests should be used in order to get satisfactory results and make sure that all the dangerous cases of defective color perception have been discovered.

IMPROVED METHOD OF TESTING COLOR PERCEPTION.*

WILLIAM THOMSON, M.D.

PHILADELPHIA.

Dr. Williams' remarks leave but little to be said in favor of the use of a lantern for examination of the color sense. In the system in use of the Pennsylvania Railroad the lantern of Donders has been advised for the testing by the ophthalmic expert, but I am now convinced that a test of this kind should be used in conjunction with the colored wool stick by all the examiners who act under the direction of the division superintendent. Two-fifths of the time of a railway employee's life is spent in governing his action by colored lights by night. The lantern furnishes the test. It also gives us the means of detection of central scotomata, or the color defects caused by central amblyopia induced by tobacco and alcohol. It consists of a small kerosene lamp, or spring candle-stick on which can be placed an asbestos chimney seven inches in height. This can also be placed over an argand burner or an electric light. Two disks of metal are attached so that they can be partly superimposed. Each disk has ten openings, the upper marked by letters from A to K, the lower by the figures from 1 to 10. They are too small to be distinguished at the proper distance. The lower disk has its openings, 10 mm. in diameter, filled by the four colored glasses used on the roads, viz., white, red, green, and blue. This is for the examination in chief, the upper for the cross examination. The upper disk has four openings, from 1 to 10 mm., which can be brought over the lower glasses to diminish their size. The other openings have dark London-smoked and ground glass to indicate the effect of storm, snow, rain, or fog. G, H, and I are efforts at imitation of confusion colors, and are called and seen as white by the color-blind. They are light smoke, pink, and blue-green to the normal eye. The last is K, a cobalt transmitting both red and blue light, both evident to the perfect eye, but appearing as blue only to the color-blind. The yellow color of the kerosene flame prevents the blue from being well seen in the pink and blue-green openings, which therefore appear white to the color-blind. The examination is made in a dark room, the man being placed 5 meters away. As the examiner turns the disk, the man is directed to call out the colors presented. Any mistakes are at once detected and if it be required can be recorded on proper blanks by using the figures or letters employed.

The degree of color defect can be determined by the use of the openings from A to D. A man with full color sense should perceive the colors when the smallest openings, 1 mm., are used. If he fails, the larger ones are used, and if at 5 mm. he fails to see the light through 10 mm. opening he is much under standard, having only 1/10; by placing him at 1 meter he may again fail and show a defect of 1/50.

No man should pass who would call the red signal, green or white; the green one, red or white; or the white one, red or green. The man should also be asked to

tell what the lights indicate as signals, the white, safety; green, caution; red, danger, halt; the blue, the inspection light, indicates that a car should not be moved showing a blue light.

To enable the officers of the road, the examiners or others, to appreciate partly the defect of color-blindness the chimney may be placed over an alcohol lamp having mixed with the alcohol a quantity of common salt. The colors are then all destroyed for those having normal sight. The illumination of the color stick, or of other colored wools in a dark room by this yellow light apparently destroys the colors, and closely imitates the defect of the color-blind. With the addition of this convenient lantern to the color stick the so-called Pennsylvania Road System[1] may be regarded as more complete. It has been in use for twenty years on that road, and has been adopted by other corporations estimated to control in all 150,000 miles of track. The lantern

*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

1 Published in full in the 6th edition, Nettleship on Diseases of the Eye.

and other instruments mentioned in the P. R. R. system can be obtained from Queen & Co., Philadelphia, accompanied by certificates of their accuracy signed by Dr. Thomson.

CUTANEOUS MANIFESTATIONS IN DIABETES MELLITUS.*

S. SHERWELL, M.D.
BROOKLYN, N. Y.

In company with its direct analogue, histological as well as in some degree functional, the skin suffers many insults from the glycosuric state, subjectively, and often bears decided objective symptoms resulting therefrom.

It never should be forgotten, though it often is, to what large degree vicarious elimination of morbid and effete matter is carried on by the skin, in its natural effort to relieve other organs in the human economy, more particularly the larger splanchnic glands, as for example the liver and kidneys, as evidenced in those cases by icterus, uridrosis, etc.

In fact, the integument must really be recognized, taken in its totality, as the largest eliminating organ of the body, which perhaps is only another way of putting the aphorism of Æsop, "that there is nothing like leather."

Skin symptoms are frequently the first to call our attention to the presence of the morbid condition which is being considered in its various aspects by this Association, and which from its most noteworthy and constant index, presence of sugar in urine, we call glycosuria.

To enumerate all the subjective and objective phenomena which this morbid condition may produce in and on the skin would almost seem like having to give a list of the ordinary diseases thereof, certainly of all the so-called primary lesions. I shall content myself with commenting on a few of the more usual, and easily recognized—though not always so by the general practitioner—and one or two of the rarer manifestations. This list may be made out in the order of relative frequency, as follows:

1. Xeroderma, or a condition of dry skin.
2. Pruritus, without any, or at least any noteworthy, objective lesions, the genital regions in both sexes apparently suffering most.
3. Eczemas, partly neurotic, at other times catarrhal, having as chief seats the genitals, and flexures of the body and limbs.
4. Furunculosis, often general in character, but sometimes regional. This is often the case with the very common occurrence of its analogue—carbuncle. The seat of preference seems to be the extensor aspects of the body, as nucha, gluteal region, etc.
5. Conditions of erysipelatous manifestations and gangrene; late symptoms as a rule will not be considered here, as they belong chiefly to the domain of general surgery.
6. Xanthoma diabeticorum, a disease accompanied by formation of xanthomatous new-growths, often in immense quantities, and more particularly over extensor surface of body and limbs.
7. Possibly, the recently recognized and not much investigated "blastomycetic dermatitis," in which tumors looking like verrucous lupus, or the so-called "tuberculosis verrucosa cutis," become fungoid in character, and on microscopical examination are found to be filled with the fungi of saccharine fermentation. There have been very few cases of this last disease noted or described, not, I think, over twelve in all. I have lately been in communication with its closest and earliest observers—Drs. Hyde and Montgomery, of Chicago—and have begged them to take its possible connection with the glycosuric state into consideration, which has hitherto been but imperfectly done; they have considered it a good suggestion. It would seem to me, from the nature of the cryptogamic parasite present, to be an interesting point for consideration.
8. Dermatitis herpetiformis—Duhring's disease.

In considering the few points given above in something like sequence, I would say that the dry skin of glycosurics is capable of a simple explanation. The parched lips, the dry throat, the dry condition of the mucous membrane, from excessive excretion of water by the kidneys, are their own explanation. This condition should always excite suspicion in the medical mind. As to their relief as far as practicable, the means are obvious, viz., local treatment, and appropriate diet and medication.

The second in order, pruritus, is always suspicious, and the urine should be carefully studied, not only that of the morning, the so-called "urina sanguinis," but that obtained after a full, rich evening meal. Sometimes the latter shows considerable sugar, when that of the morning does not. A list of palliative and curative remedies is altogether too long to be treated of here. Naturally, always the chief objective point is to relieve the diathetic condition.

Eczemas that occur so frequently, especially in the sites mentioned, may be dismissed briefly. Often the fermentation parasitic element, as well as its congener, the trichophyton, can be detected around the genitals. Lotions mildly parasitic in character usually seem to act better, and are cleanlier than salves in these conditions.

Furuncles and carbuncular states need appropriate treatment. I need not give any specific recommendations; the recognition of the cause and the attention as needed to the local condition are generally plain. I will, however, say here that in conjunction with local treatment mild dosage with arsenic and the use of Startin's old tonic are of manifest and great advantage.

I shall not consider the purely surgical questions of erysipelas and gangrene, as the gentlemen preceding me have done it so fully. I would say, however, that the only cases I have ever seen of erysipelas of the fauces and upper air-passages occurred in diabetics.

The sixth condition, that of "xanthoma diabeticorum," is now a well-recognized and striking disease of the skin, and I may be pardoned perhaps for a few moments in its description, as I very lately have had a very striking example of this condition, in the person of a woman aged about 40. [Photographs were exhibited.] It will be seen that she is covered with an immense number of papular, tubercular, and nodular tumors over extensor surfaces and limbs. These in the natural light appear of a yellow—xanthomatous—color and almost exactly resemble the tumors one sees around the eyelids, especially in the upper lid around and near the internal canthus.

This woman has now suffered nearly six years with this affection, always constantly present, but decreasing somewhat in summer, and every year becoming relatively worse. The disease in question has now been recognized for about fifteen years, first, I believe, by Malcolm Morris, of London. There are only about

*Read at the Sixteenth Annual Meeting of the Fifth District Branch of the New York State Medical Association, held in Brooklyn, May 22, 1900.

thirty-five cases reported in dermatological literature, of which two are my own. In all these cases glycosuria, generally of a pronounced character, was found. In the case above referred to, over 10 per cent. of sugar was present. In fourteen days of anti-diabetic diet alone she improved at least 30 per cent. in general condition. The case was treated last winter. In about two months, under that regimen and a little medication, the tumors had entirely disappeared, not even a macular pigmentation being left. The sugar decreased *pari passu* with improvement of her condition, and now, as I see her about every fortnight, I find the sugar reaction is very slight. Objectively, as well as subjectively, to all intents she is a well woman. I presume, however, indiscretion in diet, or laxity in treatment, would allow the disease to return.

DIABETES MELLITUS IN CHILDREN.*

HENRY DWIGHT CHAPIN, M. D.

NEW YORK CITY.

One who proceeds to investigate this subject will be at once surprised at the little that has been written on it. A large portion of the works on diseases of children say nothing at all about this disease, while others treat of it in a few lines. It is undoubtedly a rare affection in children, yet it does occur, and certain phenomena in connection with the disease should lead us to be on the lookout for it. Gerhardt has recorded 111 cases at various ages from 11 months to 16 years. In the last volume of Keating, 1895, a case was reported in which grape sugar was found in the liquor amnii of a diabetic pregnant woman. Unfortunately the infant was dead-born; but Roosa meet with a similar case in which the infant lived long enough to have the urine analyzed. In this case the examination of the urine of the baby gave a negative result, although the mother's urine and the liquor amnii showed the presence of glucose.

I report two cases which I have seen during the past year in consultation. The first one was seen with Dr. Charles Jackson, of New York, last October. The patient, a boy of 4½ years, had always been delicate, but had never had any special disease. He was taken to see the Dewey parade, and was perhaps unduly exposed and fatigued. Following this he seemed to be out of condition, and to have a slight fever. A physician was called in, who diagnosed malaria, and the child was accordingly put on quinin, but did not improve. Dr. Jackson was then called in, and found no cause for the failing health until he examined the urine and discovered that it was loaded with sugar. The child passed from 105 to 110 ounces of urine daily. I was called in consultation on October 10, Dr. Jackson having first seen the case on October 6. I examined the case very carefully, and could find absolutely nothing in any of the organs to account for the atrophy of the child. There was no evidence of tuberculosis. I gave a very bad prognosis. The child died three days later. There had been no other symptoms except loss of appetite and interest, and emaciation. The course of the disease was apparently about three weeks.

The other case I saw in consultation with Dr. McPhee, of Harlem. This occurred in a boy of 6 years, and the duration of the disease was between three and four weeks. On examination, I could find no cause for the rapid atrophy evidently taking place. The only feature of the physical examination was hydrocele of the right tunica vaginalis. When I saw the child he was in a state of semi-stupor; it could hardly be called coma. A few days later Dr. McPhee sent me word that the child had lived four days after the consultation. The coma had diminished following a free sweating and relaxation of the bowel; then it had gradually deepened until the end. In both of these cases the urine contained approximately 5 per cent. of sugar. The sugar continued to be present in about the same quantity up to the last. The respirations rose to 56, and the temperature to 101.2 F., while the pulse ranged between 110 and 140 during the last few hours of life. The only nervous manifestation was a peculiar reaching movement of the hands. The pupils responded to light. His emaciation was so rapid that it could be distinctly noted in the four hours elapsing between the visits of the attending physician.

In my experience, I have met with only a very few cases of diabetes mellitus. I believe we can sum up our knowledge of this disease very briefly. First, I would call attention to its exceeding rarity. I have the urine examined of all the children in the babies' wards of the New York Post-Graduate Hospital, and also in the Willard Parker Hospital, and of the Riverside Hospital; yet it is exceedingly rare to find any sugar in the urine. The next point that I should make is that the disease is exceedingly fatal in young children. Why this is so, I am at a loss to explain. In both of the children referred to there was no evidence of assimilative disturbance, and the children had been in a state of good nutrition.

In looking up the literature I found one case which was reported to have recovered. In the light of our present knowledge of this disease, and particularly what we have just heard about testing for glucose in the urine, I should doubt if in this case the diagnosis was correct.

The third point I should make is that this disease in children is accompanied by exceedingly rapid emaciation. A few weeks ago a little girl of 10 years was sent to me, a diagnosis of diabetes mellitus having been made. The mother stated that three or four specimens of the urine had shown sugar. A specimen was sent to me, and I failed to find sugar by Nylander's test. I found the child to be fairly well nourished, and during the four or five weeks that the glycosuria was said to have lasted she had not failed materially. I therefore felt justified in stating that the child was not suffering from diabetes mellitus. Subsequent examinations have failed to show any glycosuria. I believe whenever a child is brought to the physician with a rapid atrophy he should examine the urine for sugar. I wish to emphasize the statement that this is one of the diseases of childhood which produces rapid atrophy.

*Read at the Sixteenth Annual Meeting of the Fifth District Branch of the New York State Medical Association, held in Brooklyn, May 22, 1900.

Vacancies in Medical Corps of Navy.—A naval medical board of examiners for examination of candidates for admission to the medical corps of the navy is now in session at the Naval Laboratory, Brooklyn, N. Y., and will remain in session for several months. There are now seventeen vacancies in the list of assistant-surgeons. Congress at its last session passed a law taking assistant-surgeons out of the steerage and making them ward-room officers as soon as they entered the service, giving them the rank of junior lieutenants and the pay of assistant-surgeons in the army. Candidates must be between the ages of 21 and 30. Circular of information can be obtained on application to the surgeon-general of the navy, navy department.

INFLUENCE OF SEA-AIR AND SEA-WATER BATHS ON DISEASE.*

W. BLAIR STEWART, A.M., M.D.

Late Assistant Professor of Pharmacology and Physiologic Action of Drugs, Medico-Chirurgical College; Surgeon to Atlantic City Hospital; Member American Medical Association; American Academy Medicine, Etc.

ATLANTIC CITY, N. J.

The purest air in nature is that found on the high sea after traversing hundreds and thousands of miles of pure sea-water, uncontaminated by smoke, dust, and the exhalations of cities. Saline mists and fogs clarify, purify, ozonize, and vitalize the air. Sea-air is tempered by its surroundings; in summer it is cooled by radiation from the lower water-temperature and in winter warmed by the higher water-temperature. Moisture is also taken up by it and a doubtful infinitesimal per cent. of salt. The so-called trace of iodin is very questionable and can not be positively demonstrated. Sea-air is classed as an alterative by some, but not on account of its supposed iodin.

Outside of an island in mid-ocean, Atlantic City is probably situated in the best location for pure sea-air; better than any point on the eastern coast of the United States. Its geographical location is on an island of pure sand, five miles from the mainland, and twenty miles seaward of the head of tide-water; at a point of a bend in the coast line, thirty miles northeast from Cape May and seventy miles from New York bay, where the fresh waters mingle with the ocean. It is surrounded by a body of salt water, uncontaminated by fresh water streams, and entirely free from malarial or any other paludal poisons. The salt meadows between the island and the shore are overflowed by tide-water twice in twenty-four hours. The gulf stream is about 125 miles from the shore and tempers the surrounding sea-water and the air so that in winter it is from 10 to 20 degrees warmer and in summer from 10 to 20 degrees cooler than interior cities. High winds are less frequent than at other points. Sea-air mixed with sea-fog is not injurious to most cases, as it contains no noxious elements, is non-irritant, and quite equable in temperature. The two great effects of sea-air are upon the nervous system and digestion.

Coming from the dense air of cities and the rare air of high altitudes, respiration and heart action are slowed, at once reducing the consuming energy of the body and lessening waste. Sea air is dense and ozone-laden and, therefore, it increases the oxidizing power of the blood and is Nature's best remedy for anemia. It assists in fighting the malarial parasite, and will, in time, eliminate the poison from the system. Malarious subjects come to the shore and often overload the stomach, overheat themselves, sit in the cold, indulge in promiscuous sea-bathing, thus bringing on acute paroxysms, and then blame Atlantic City. If care be exercised, the usual chill may often be avoided. Night air here is not injurious to these cases. Patients with heart disease do well here, as less work is thrown on that organ and oxidation is carried on better than in higher altitudes. Cardiac dropsy sometimes improves for this reason.

Convalescents from disease and those who have been debilitated, over-worked, and confined to rooms and offices, invariably improve, if they live hygienically, and follow proper dietetic rules. The effects of sea-air are stimulant at first, and add vigor and tone. Appetite is increased decidedly and a drowsy feeling is almost sure to follow its satisfaction with a refreshing night's sleep. Many business men come to Atlantic City periodically to get a full night's rest and sleep. Strumous and tubercular children and adults will improve rapidly if they live in the sea-air and follow proper dietetic rules. Many such cases have been apparently cured here with little medicine. Tuberculosis in its early stages is amenable to treatment in sea-air and sunlight. Such cases should invariably act under physicians' advice. Consumption in its later stages is best at home, as it will not improve here. Many cases of bronchitis are permanently cured by sea-air. There is less danger of pulmonary hemorrhage in sea-air at sea-level than in high altitudes, owing to the 15 pounds pressure to the square inch here and the density of the air; in higher altitudes the internal blood-pressure is not so readily equalized at first and often gives rise to hemorrhage. Many cases of asthma and emphysema do well here, while others are made worse. Trial only can demonstrate. Hay-fever almost invariably disappears in sea-air, but when the wind comes from the land it may be aggravated.

It is a mistaken idea to think that one can not catch cold at the seashore, but one coming here with an acute cold will throw it off more rapidly than in the interior. Some people cure their colds by sailing every day and living on the board walk. Hot and close rooms are to be avoided at the seashore, as they are productive of colds and depression. Laryngitis and acute catarrhal troubles do well at the shore if properly managed; but do poorly, if smoking, late hours, and carousing are encouraged. Acute lobar pneumonia is rarely seen in Atlantic City, and when it is it usually runs a very mild course. Cases of Bright's disease and diabetics in the early stages do well. Contrary to the writings of some, many cases of eczema and skin troubles improve perceptibly and are cured in sea-air. This is particularly noticeable in young strumous children. Digestive troubles are very amenable to treatment if proper rules are followed.

Neurasthenics do particularly well in Atlantic City in the fall, winter, and spring months, but not in July and August, when the large crowds are here, unless they go to parts of the island that are isolated. Insomnia soon leaves and nerve tone rapidly improves. Melancholia and insanity are usually aggravated by sea-air. Hysteria may or may not be improved, acording to the cause. Neurasthenics may find the first few nights here unpleasant and restless, but these soon give way to sound sleep. These cases should be closely watched to prevent abuse of surf, hot, and cold sea-water baths.

Sea-water is a physical and chemical mixture and varies in the quantity of constituents in various localities. Its strength is affected by admixture with fresh water; the depth from which it is taken; the air, temperature, and ocean currents. Chemists say that it contains about 3.5 per cent. solids and 96.5 per cent. of water. The main solid constituents are sodium chlorid (2.7 per cent.), magnesium chlorid (0.3 per cent), magnesium sulphate (0. 2 per cent.), calcium sulphate, calcium carbonate, potassium chlorid, magnesium bromid, traces of carbon dioxid, iodin, etc. One chemist figures 3½ grains of bromin in 100 pounds of sea water. Salt baths are necessarily medicated baths and must be taken under limitations by the sick and well.

No form of sea-water baths is so generally used and abused as the surf bath. It combines the effects of cold and violent exercise. On entering a cold bath there is a

*Presented to the Section on Practice of Medicine, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

shock, with contraction of the skin and muscles, pallor, quickened respiration and heart action, slight depression, shivering, and reduction of temperature. This lasts for a few seconds or minutes, when a reaction sets in. Respiration slows; the heart acts less vigorously; a general glow comes to the skin, and a sense of invigoration or stimulation follows. If continued beyond this point, depression again follows with weakened heart action, blueness of skin and lips, shivering and chilling, and a feeling of prostration and drowsiness. If still persisted in, coma, syncope, throbbing headache, apoplexy in the aged, congestion of the internal organs, subnormal temperature, or death from general depression will follow. All these symptoms are intensified in the presence of exercise and in moving sea-water. It is well known that moving water will abstract much more heat than still water.

Wave force and pressure varies with the depth of the water, direction of the wind, ebb and flow of tide, and the pressure of breakers. Exercise beyond the breakers where the waves regularly follow each other is not so violent. A slight jumping or rising motion is sufficient to float over the wave without much shock; but if one stands and receives its full impact the shock is terrific. This soon produces physical strain and soreness. Floating and swimming beyond the breakers is quite invigorating. Most force is expended by bathing in the breaking waves (breakers), and it is practically a series of blows that soon exhaust. Many prefer the washing effects of the broken wave and return flow to be obtained by lying just to the shore side of the breakers. This is the least exhausting form and best suited to children.

Many do not experience a reaction after entering the ocean and come out of the water with so much depression that days and sometimes weeks are required to recover. Such subjects should never take surf baths nor even cold tub baths. The proper time to leave the surf or cold bath is during the height of exhilaration or reaction, which comes on in from three to fifteen minutes in the strongest subjects. Leave the bath and immediately go to the bathroom and rub briskly with a coarse towel and then rest. Many lose the real benefit of the bath by exercising too freely afterward. Daily bathing is usually too depressing to the average person; every other day is best. If stimulants are necessary to bring about reaction it is harmful and should be avoided. It is my custom to begin, in many cases, with tepid or cool baths in the tub or pool and gradually accustom the patient to cold before permitting a surf bath. The temperature of sea-water at Atlantic City varies from 65 to 75 or 80 F. in summer, and from 45 to 60 in winter.

It is unwise for any one to enter the surf bath before his morning meal and never until three hours have elapsed after eating. Cold baths retard digestion. Never come from the water and go directly to meals until reaction has been thoroughly established. Great excitement of any kind is a contrary indication to entering the water; also immediately after exercising freely, or indulging in intoxicating drinks, as alcoholics prevent healthy reaction. Patients with bad varicosities are liable to rupture them in the surf. Children under three years and real old persons should never bathe in the surf or cold bath, as their resisting and reacting power is too low. Never force young children into the ocean, as it is productive of harm. Other contraindications to surf bathing are advanced heart disease, atheroma, bronchitis, menstruation, advanced Bright's disease, pregnancy after third month, rheumatism, acute gout and acute diseases.

Mild forms of neurasthenia, insomnia, anemia, indigestion, and debility by too close confinement are most benefited by surf or cold sea-water baths. Tepid and cool salt baths are best for convalescents, those whose reaction is very poor, and young children. Sea-water baths act upon metabolism much more than fresh water. Tissue oxidation is increased and elimination much improved. Weight at first decreases but later increases.

Warm salt baths at 85 to 97 F. are used to encourage slight perspiration, relax the skin, reduce internal congestions, and carry off a part of the body poisons through the skin. These baths should always be taken in a warm room and never prolonged over ten minutes. They should be followed by a good rub with alcohol or cocoanut-oil and a rest of at least one hour. Many prefer this bath at bedtime to induce sleep. Some aged neurasthenics and those with low resistive power do best with these baths. My policy is to give the salt bath only every other day. When continued too long there is headache, flushed and throbbing temples, great prostration, languor, and rapid elevation of temperature, and body oxidation is reduced. Warm baths are used in all cases where relaxation of the sudorific glands is required, and in reduction of many forms of pain. The hot sea-water bath is rarely of much use except in uremia and to produce profuse perspiration. The practice of so many people taking warm and hot sea-water baths indiscriminately is productive of much more work for the physician and harm to themselves. Untrained attendants will always put your patients into baths that are too hot and keep them there too long. It is always wise to lay down explicit rules for each case and enforce them. Never tell a patient to take warm or hot sea-water baths and then trust to his knowing how to take them.

THE IDENTIFICATION OF DEXTROSE IN HUMAN URINE.*

HEINRICH STERN, PH.D., M.D.

Professor of the Diseases of Metabolism, College of Physicians and Surgeons, St. Louis; Visiting Physician, New York Red Cross Hospital; Attending Physician, St. Elizabeth's Hospital; Member American Medical Association; Member American Chemical Society; Fellow New York State Medical Association, etc.

NEW YORK CITY.

Dextrose, in insignificant traces a constituent of almost every normal urine, can be readily demonstrated in the renal excretion, provided it occurs in sufficient amounts. The moment, however, that urinary grape-sugar is detected by the more commonly employed methods, it indicates a deviation from the normal systemic state. Thus, in glycosuria, no specific pathologic element makes its appearance, but a regular constituent of excessively increased quantity. While, as a rule, glucose can be positively identified in urines containing 0.5 per cent. or more of it, great difficulty in this respect is often experienced when smaller amounts are present.

Glycosuria, a well-defined condition, resulting from or concurring with some systemic anomaly, is most always recognized by the painstaking physician; yet, certain systemic occurrences—physiologic or pathologic—may be erroneously diagnosed as glycosuria, when, as a matter of fact, grape-sugar in appreciable quantities was never discharged by the urine. Coinciding with pseudo-glycosuria, there may be other symptoms apparently

*Read at the Sixteenth Annual Meeting of the Fifth District Branch of the New York State Medical Association, held in Brooklyn, May 22, 1900.

pathognomonic of the diabetic state; thus, I know of a number of instances where individuals underwent treatment for diabetes without ever having been subject to this affection.

Glycosuria is frequently noticed first by the medical examiner of a life insurance company, and there is no reason to doubt the correctness of the diagnosis in the great majority of instances; however, many spurious cases, which came under my observation, were originally interpreted as glycosuria by life insurance examiners.

This pseudo-glycosuria, or diabetes, which has absolutely nothing in common with the true condition, debars the applicant from obtaining any life insurance.

In the *Medical News* of June 4, 1898, under the title of "The Life-Insurance Company and Its Encroachment upon Personal Rights," I referred to the following instance: "A colleague, aged 45 years, of good physique, good family history and good habits, applied for life insurance in one of our companies. He was rejected on account of diabetes. Numerous examinations of his urine did not reveal to me any glucose, nor does his general condition warrant the assumption of a glycosuric or diabetic state. The applicant himself was, and still is, in the habit of examining his urine from time to time, and as yet has never detected any grape-sugar or any other abnormal constituent. The inefficient examiner was evidently mistaken and negligent. Possibly his Fehling's solution had deteriorated; possibly the few pieces of chemical apparatus used were not previously thoroughly cleaned. No matter what caused the apparent copper reduction, it was this official's duty to apply at least one control test to ascertain the presence of glucose. Had he done so the rejection of the applicant on account of diabetes could not have occurred. I have selected this case from a number of others which I have in mind, as it occurred recently, and as the applicant is a well-informed, conscientious and trustworthy physician."

I repeat, that in the case just alluded to, not a single abnormal urinary constituent was present, that transitory glycosuria, as experimentally proved, had to be excluded, and that the reduction of the copper solution was due to either its deterioration, or to unclean apparatus, or to inexperience of the examiner, or to any two or all of these possibilities together.

Gross negligence, to say the least, is often exercised when testing for dextrose in the urine. I distinctly recall three cases designated as "diabetes" by life-insurance examiners, where the reduction of copper in alkaline solution was caused by tartronyl-cyanamid in excess. Had the analysts performed one or two control tests, such an error would never have occurred. Some instances of apparent glycosuria were in reality such of creatininuria. The application of the Weyl-Salkowski test for creatinin left no doubt as to the true reducing factor.[1]

A case of supposed diabetes referred to me for treatment in 1895 turned out to be one of urobilinuria. Urobilin, which was present in greatly increased amounts, imparted to the urine reducing qualities; hence, Trommer's test, when applied by the family physician, gave apparently positive results. A few control tests divulged the non-presence of glucose, and urobilin in rather abnormal quantity was detected by two very simple processes.[2]

Another case of assumed diabetes which I encountered proved to be one of intestinal hyper-putrefaction, with accompanying indicanuria. Evidently the family physician who rendered the original diagnosis was only acquainted with the bismuth tests for the detection of dextrose, for urine rich in indican possesses the property of reducing the bismuth salt. It was an easy matter to disprove the occurrence of glycosuria, and to point out indoxyl-potassium sulphate as the reducing substance.[3]

Alkaptonuria, so-called, is of comparatively infrequent occurrence; however, when it is first recognized in an applicant for insurance or in a patient, it is most always mistaken for glycosuria. The reducing effect of the alkaptonic acids upon alkalin copper solutions is similar to that of dextrose.

These acids, however, do not undergo fermentation, and do not reduce bismuth subnitrate like glucose, although they may cause a precipitation of a brownish substance; alkapton does not reduce picric acid in the presence of a free alkalin hydrate, and does not respond to the phenyl-hydrazin and polariscopic tests for dextrose. Exposed to the air, its solution resumes a much darker tint. A young man, aged 19, in 1894, was rejected by one of the large New York life insurance companies on account of what they pronounced "diabetes." The applicant's medical adviser, who felt satisfied as to the presence of glycosuria and some of its apparent concomitant manifestations, instituted a rigid antidiabetic diet and prescribed a preparation of opium. The supposed glycosuria was not diminished at the end of four or five months' treatment, and the patient, finding himself growing gradually weaker, called in some other practitioners, who were of unanimous opinion as to the nature of the affection. A consultant of great prominence, not questioning at all the correctness of the diagnosis made by the other physician, finally advised a prolonged sojourn at Carlsbad. An analysis of the patient's urine made soon after his arrival at Carlsbad revealed the presence of 2.5 per cent. of glucose. Uranalysis, performed by the same chemist, just before the

1. Weyl-Salkowski test for creatinin. Reagents. 1. Ten per cent. solution of sodium nitroprussiate; 2. Ten per cent. solution of sodium hydrate: 3. Acetic acid.

Detection: If to a specimen of urine containing creatinin a few drops of the freshly prepared sodium nitroprussiate solution and some of the sodium hydroxid in solution are added, a transitory ruby discoloration of the urine, soon turning into yellow, is produced. Addition of acetic acid and subjection to heat when the yellow color is obtained imparts to the mixture at first a greenish and then a bluish tint. Finally, a precipitate of Berlin blue is thrown down. The reaction will occur only if the mixture has been heated.

2. *a.* Detection of urobilin: Reagents—Ammonium hydroxid and solution of chlorid of zinc. The urine, rendered alkaline by the addition of ammonia, is separated by filtration from the phosphatic deposit. To the filtrate, a few drops of a chlorid of zinc solution are added. The occurrence of a green fluorescence denotes the presence of excessive amounts of urobilin. The mixture, on spectroscopic examination, shows the characteristic absorption band on the intersection of green and blue, between Fraunhofer's lines *b* and *F*.

b. Reagents—Chloroform, alcoholic solution of chlorid of zinc, and absolute alcohol. Detection: The urine and a few c.c. of chloroform contained in a test-tube, are repeatedly, but gently, shaken together. After separation of the chloroform, one drop of an alcoholic solution of chlorid of zinc is added to it. If urobilin is present in appreciable amounts, a rose-red discoloration with green fluorescence will ensue. In case the mixture has become turbid, it will clarify on the addition of absolute alcohol. (E. Wirsing: Verhandlungen der Würzburger phys. med. Gesellsch. N. F., xxvi, No. 3).

3. Jaffé's test for indoxyl—potassium-sulphate. Reagents—Hydrochloric acid; concentrated, freshly prepared solution of chlorid of calcium, and chloroform or ether. To 10 c.c. of the albumin-free urine in a test-tube, add an equal volume of concentrated hydrochloric acid and heat. Next add, drop by drop, of a concentrated, freshly prepared solution of chlorid of calcium until the maximum blue tint is reached. Following this the mixture is well shaken with 2-4 c.c. of chloroform (ether, Salkowski). The chloroform-extract of indican, on standing, settles on the bottom of the test-tube, and the depth of its color may serve as an approximate indicator of the amount of indoxylpotassium sulphate contained in the urine.

patient's departure from that town, demonstrated 0.5 per cent. grape-sugar only.

After an examination of the young man's urine made by me I stoutly contended that its copper-reducing constituent was not dextrose, but one of the alkaptonic acids. Numerous analyses of the same urine, which I subsequently performed, confirmed my original assumption in every instance.[4] I have examined the urine in question prior to the gentleman's departure for Europe and also soon after his return, and I assert that he never excreted any urinary glucose before he left nor ever after he came back. The inferences to be drawn from this instance are obvious, and this case drastically illustrates the methods in vogue at certain continental watering-places.

Negligence, above all, is responsible for the errors in diagnosis in the instances heretofore cited. Such mistakes are never made by conscientious and painstaking examiners, for, if they do not feel themselves competent to definitely diagnose a given case, they invite efficient assistance, and thus untold anxiety and many an unjust rejection may be averted. A patient is free to change his physician when he has found him incompetent, but this advantage is denied him when he is an applicant for life insurance, for, in this case, the medical examiner is virtually an autocrat, whose opinion—"Roma locuta, causa finita"—leaving the benefit of the doubt always to the company employing him, is decisive. In many instances the life-insurance examiner is not chosen for his ability and reliability in matters medical. On the other hand, even if all necessary precautions are taken, it is not always an easy task to positively identify grape-sugar occurring in small, but still, pathologic, amounts. This is due to the limited resources for chemic research at the disposal of the general practitioner and his lack of special training for more exact analytic work.

The delicacy of a test for glucose is dependent upon the character of the latter's solution, hence, a test for dextrose, in point of sensitiveness, responds differently if applied to a watery solution than if used with the urinary fluid. Furthermore, the delicacy of a glucose test is not the same in all urines, being dependent on quality and quantity of the other urinary constituents. Sensitiveness of a method for the detection of glucose in the urine is by no means identical with its accuracy and reliability. Thus, Trommer's test, for instance, is an exceedingly delicate one, if skilfully applied to certain urines; in the great majority of instances, however, its trustworthiness can not be relied upon for amounts of dextrose less than 0.5 per cent. The same may be said of the other testing methods in general usage. Böttger's or Johnson's picric acid or the fermentation tests are equally delicate under favorable conditions, but, according to my experience, their employment should be restricted to urines containing 0.5 per cent. and more of grape-sugar.

4. Detection of the alkaptonic acids: 1. Reagent—Chlorid of iron. Chlorid of iron added to a solution of homogentisinic acid produces a transitory blue discoloration; added to a solution of uroleucinic acid, the ensuing discoloration is green. 2. Millon's reagent—In unheated alkaptonic acid solutions, Millon's reagent slowly produces a yellow precipitate, gradually turning to orange; the color of the precipitate, on being heated, readily changes to light terra-cotta red. Other tests for the presence of these acids or the methods for their preparation are too complicated for execution by practitioners of medicine. The darker color, when exposed to the air, the negative results obtained with the bismuth, the picric acid and the fermentation tests, the optic inactivity and the heretofore-mentioned tests, suffice for the recognition of alkaptonuria and for its discrimination from glycosuria. However, the definite identification of the acids is possible only by their preparation from the urine.

By the application of tests most generally used, pathologic quantities of urinary glucose may be overlooked altogether, or grape-sugar may be confounded with a number of other urinary constituents. Especially is this the case where the other concomitant manifestations are equally ill-pronounced. I have prepared the following list to show the limit of sensitiveness and that of reliability of the different tests:

Tests for Dextrose in the Urine.	Limit of Sensitiveness. Percentage.	Limit of Reliability. Percentage.
BISMUTH TESTS.		
Böttger's	0.1	0.5
Nylander's	0.1	0.3
Brücke's	0.2	0.4
Maschke's	0.2	0.4
COPPER TESTS.		
Trommer's	0.1	0.5
Salkowski's	0.5	0.5
Seegen's (filtration of urine through animal charcoal)	0.01	0.05
Fehling's	0.3	0.3
Worm-Mueller's	0.25	0.3
Haines'	0.2	0.3
Elliott's	0.2	0.3
Pavy's	0.2	0.3
Phenylhydrazin test	0.03	0.05
Moore-Heller's	0.5	0.75
Penzoldt-Rubner's (ammonia-lead acetate)	0.1	0.2
Methylene-blue test	0.04	0.3
Picric-acid test	0.1	0.5
Sodium sulpho-indigotin	0.1	0.5
Hoppe-Seyler's (Nitrophenylpropiolic acid)	0.5	0.75
Penzoldt's (Paradiazobenzolsulphonic acid)	0.1	0.3
Furfurol tests	0.02	?
Horsley-Pratesi's (caustic potash, potassic silicate, potassic bichromate)	0.4	0.75
Fermentation test	0.1	0.5
Polarization	0.01 with best instrument.	1.0 and over by instruments in general use.

In the following I have recounted those disturbing factors which impair the value and mar the lucidness of the different processes commonly employed for the detection of dextrose in the urine:

THE BISMUTH TESTS.

1. Böttger's Process.—This test depends on the reduction of bismuth subnitrate in an alkaline fluid to black metallic bismuth in the presence of sugar.

Disturbing factors and sources of error.—Excessive amounts of pigment, glycuronic acid, mucin and other urinary constituents containing sulphur by the production of bismuth sulphid, which in appearance is similar to bismuth reduced by sugar. (If but traces of sulphur are present, a reddish-brown sediment is produced.) The grayish tint often imparted to the bismuthic salt is by no means indicative of the occurrence of minute amounts of urinary dextrose.

Prevention.—The coloring matter should be separated by filtration through animal charcoal. Most proteid substances are removed by boiling of the acid urine, by acidifying and boiling of neutral or alkaline urine. The coagulate is allowed to settle and the test is performed with the clear urine.

2. Brücke's Method.—The separation of albumin—a possible source of error—Brücke accomplished by the aid of Fron's reagent, an acidulated solution of bismuth—potassium iodid—[5] which, by supplying bismuth oxid, serves at the same time as a detector of urinary glucose. A precipitate of bismuth-iodid is produced in the diluted solution. This sedimentation would, consequently, also occur on the addition of the reagent to the unacidulated urine. As, however, an excess of acid would redissolve the albumin-precipitate called forth

5. Preparation of reagent: One and one-half grams freshly-precipitated bismuth subnitrate is heated with 20 grams distilled water to the boiling-point; 7 grams potassium iodid are afterward dissolved in the mixture, which then assumes a red coloration. The whole is finely acidulated with 1.5 grams hydrogen chlorid.

by the bismuth, it is essential to ascertain what quantity of hydrogen chlorid has to be added.

The following process is, therefore, recommended: Two test-tubes are filled to the same height, the one with water and the other with the urine to be examined. Sufficient hydrogen chlorid is added to the water contained in the one tube so that a drop of the reagent does no longer produce turbidity. In this manner the amount of HCl necessary to keep the bismuth-iodid in a known volume of the reagent still in solution, is learned. The urine is then acidulated with the quantity thus ascertained, following this the reagent is added, and when precipitation seems complete the whole is filtered. To the filtrate, which should show no turbidity, on the addition of HCl or the reagent, an excess of potassium or sodium hydroxid is added and the mixture treated as in Böttger's test. Bismuth-potassium iodid produces also precipitation of the albumoses (pepton), which does not take place when the common process of albumin coagulation is employed.

Disturbing factors and sources of error.—Glycuronic acid ($C_6H_{10}O_7$) and glycuronic anhydrid ($C_6H_8O_6$), in my experience, invariably impaired the end reaction. An excess of certain pigmentary bodies, especially uro-erythrin, produce a grayish to black deposit of earthy phosphates in urine, rendered alkaline by potassium or sodium hydroxid.

Prevention.—Glycuron and glycuronic acid and its combinations can not be readily separated by means at the command of the medical practitioner. All he can do is to resort to a number of control tests. The coloring matters may be partially eliminated by above-mentioned methods.

3. Maschke's Method.—In this process a solution of sodium tungstate in acetic acid[6] is employed for the separation of the protein substances in the following manner: The addition of the reagent to one-fourth or one-third volume of the urine in a test-tube, causes precipitation of the albuminous material. The urine is then filtered and again treated with some drops of the reagent. If no new precipitate appears in the filtrate, half the latter's volume of concentrated sodium hydroxid and a small amount of bismuth subnitrate—about 0.05 gram—are added and well shaken together. In case the bismuthic salt undergoes a brownish or blackish discoloration before the mixture is subjected to heat, then sulphur combined as hydrogen sulphid is contained in the urine. The removal of the latter is accomplished by agitating a new sample of the urine with acetic acid and bismuth nitrate, the filtrate being afterward treated with sodium tungstate as above. Glucose is only then present when on the application of heat immediate blackening of the bismuthic salt ensues. A brownish hue of the bismuth oxid appearing on heating, or a black discoloration of the precipitate on boiling, for a more protracted period, indicates the occurrence of normal amounts of sugar.

Disturbing factors and sources of error.—Urinary pigments, glycuronic anhydrid, glycuronic acid and its combinations, hydrogen sulphid. Almost every normal urine blackens bismuth oxid when the amount of potassium or sodium hydroxid utilized is far in excess. The reducing substance, however, is not sugar.

4. Nylander's Test.—Almén's[7] solution is the reagent employed in this method. One part of the reagent is added to ten parts of the suspected urine. On boiling for from two to five minutes the white precipitate which is produced by the addition of the test solution to the urine, gradually assumes a more pronounced discoloration, turning finally black in the presence of dextrose. A very small percentage of sugar produces a brown hue of the precipitate; a dirty yellow or a grayish discoloration is of no significance as to the presence of dextrose. A secondary blackening of the precipitate, which may take place when the urine mixture in the test-tube is cooled off, does not evince the occurrence of abnormal quantities of grape sugar. Uric acid and creatinin do not reduce the bismuth salt. Pure peptone does also not influence the reaction. The test boils over easily; this may be prevented by putting the test-tube into boiling water.[8]

Disturbing factors and sources of error.—Pigmentary bodies, principally uro-erythrin, hematoporphyrin, indoxyl-glycuronic acid and other glycuronic-acid compounds, ammonium carbonate in decomposing urines, hydrogen sulphid, mucin, albumin and other urinary constituents into whose composition sulphur enters. If the reagent is added to a 0.6 per cent. albumin solution, a red precipitate will be produced; in urine containing 1 to 2 per cent. of albumin the ensuing precipitate is black, and in appearance easily mistaken with the reduced bismuth salt. The reaction is yet a fair one if 0.2 per cent. albumin occur together with 0.1 per cent. sugar; it is but faint if 0.35 per cent. albumin occurs simultaneously with the same quantity of sugar; if the reaction will not take place, 0.45 per cent. albumin is contained in a 0.1 per cent. sugar solution. Saccharin is among the substances preventing the reduction. Reduction of bismuth oxid has been noticed after the administration of a number of drugs, as antipyrin, acetanilid, arsenic, salicylic acid or salicylates, quinin, sulphur, mercurials, salts of iodin, turpentin, kairin, rheum, senna, santonin, tannic acid, chloral hydrate, tincture of eucalyptus, salol, benzol, sulfonal, trional, sodium benzoate, large doses of creosote (Stern), podophyllotoxin (Stern). There is little doubt, in my opinion, that the administration of some of these drugs is followed by an increased output of urinary pigmentary substances to which the reducing qualities have to be ascribed. In other instances, as with rheum and senna, the reducing power seems to lodge with the newly-ingested chrysophanic acid ($C_{15}H_{10}O_4$).

Prevention.—Separation of the coloring matters, removal of the hydrogen sulphid by agitation with lead oxid, elimination of proteids. Specimen of urine should be voided in a period during which no medicinal agents were administered.

THE COPPER TESTS.

The various copper tests so extensively employed in clinical work depend upon the power of dextrose to reduce cupric oxid to a lower degree of oxidation in strongly alkaline solutions.

Trommer's Test.—The filtered urine is rendered alkaline by the addition of one-third its bulk of sodium and potassium hydrate. Then, drop by drop, a 5 to 10 per cent. solution of copper sulphate is added under constant agitation until the blue precipitate of cupric hydroxid—$Cu(OH)_2$—which appeared upon the addition of the first drop of the copper sulphate solution, does not

6. Preparation of reagent: Crystalized sodium tungstate, 30 parts; acetic acid—30 per cent.—75 parts; distilled water, 120 parts.

7. Preparation of reagent: Potassium and sodium tartrate, 4 grams, and basic bismuth nitrate, 2 grams, are, under heat, dissolved in 100 grams of an 8 per cent. solution of sodium hydrate. When cooled the yellow bismuth oxid is filtered off and the solution, which does not deteriorate for a long time, is kept in a dark bottle.

8. The reduction or pseudo-reduction of the bismuth salt may be frequently due to substances other than dextrose. The chief value of this test, however, lies in its negative result, for the non-reduction of the bismuth positively excludes the presence of glucose in abnormal quantities.

dissolve any longer. After this the mixture is slowly heated, but never to the boiling-point. If sugar is present, the dark-blue color disappears, and a yellow or red precipitate of cuprous oxid (CU_2O) is rapidly produced while in the course of heating.

Notes.—If either sugar, albumin, ammonia, tartaric acid or glycerine is contained in the urine to be examined, the precipitate of cupric hydroxid is redissolved and the fluid turns dark blue. If, on the other hand, the precipitate does not dissolve at all when the test-tube is strongly shaken, it may be concluded that abnormal quantities of dextrose do not occur in the urine. Should the blue mixture on being heated change its color to yellow without the production of a cuprous oxid precipitate, or should the latter appear only while the mixture is *boiling,* or when it has *cooled off,* it is dubious whether the reaction was caused by grape-sugar or not. It is solely the rapidly-occurring reduction of the copper salt taking place before the boiling-point is reached which is of significance as to the presence of glucose. An eventual deposit, on cooling, consists of flocculent earthy phosphates. Prolonged boiling may call forth a black discoloration of the mixture by the separation of copper oxid and metallic copper. As normal urine also possesses decolorizing qualities, and as the amount of urine necessary to perform Trommer's test is a comparatively large one, reduction of the copper salt may readily ensue by the action of urinary constituents other than dextrose.

Disturbing factors and sources of error.—There are two classes of urinary substances which interfere more or less with Trommer's and other copper tests. 1. Such bodies, besides glucose, which cause copper reduction. 2. Such elements, which, when present in increased amounts, will prevent the reduction. To the first category belong uric acid, the urates, creatin, creatinin, hypoxanthin, allantoin, hippuric acid, indican, alkaptonic acids, nucleo-albumin, urinary pigments, glycuronic acid, brenzacatechin, hydrochinone, lactose and other carbohydrates. The urine possesses copper-reducing qualities after administration of alkaloids, arsenic, tannin, gallic acid, pyrogallol, camphor, copaiba, cubebs, chrysophanic acid, salicylic acid and salicylates, oxalic acid, chloral hydrate, acetphenetidin, turpentin, glycerin, sulfonal, thallin and benzoic and carbolic acids. These urinary constituents and drugs, however, call forth but an incomplete reduction, viz.: Discoloration of the fluid without production of precipitate, or formation of precipitate on boiling only or when cooled off. Among the substances which when present in increasing amounts prevent or retard the reduction, we find albumin, parapepton, peptone, salts of ammonia, saccharin. Urine rich in ammonia—after the decomposition of carbamid into ammonia carbonate—may keep the cuprous oxid in solution. Such a urine may become decolorized, but it may retain its transparency on boiling. Albumin prevents the separation of cuprous oxid, but mere traces of albuminous substances do not interfere with the test.

Prevention.—For the purpose of eliminating these disturbing factors a number of suggestions and modifications have been advanced. Dilution of the urine with water has been recommended to neutralize the influences of reducing agents other than glucose. The diluent, however, must not be added in such excessive quantities as to prevent the copper reduction by the grape-sugar itself. Sr. Johnson believes that all reducing substances, with the single exception of dextrose, may be separated from the urine in the form of mercuric oxid combinations. The process recommended is this: To the suspected urine 0.05 its volume of cold saturated solution of sodium acetate and 0.25 its bulk of cold saturated corrosive mercuric chlorid solution are added. Forty-eight hours after, the precipitate containing uric acid and creatinin is filtered off. If by the careful addition of ammonia the excess of mercuric oxid is removed from the filtrate, glucose in normal urine can not be detected any longer. However, if the mercury is separated from the filtrate with aid of hydrosulphuric acid (H_2S) and the latter is removed by boiling, the fluid is said to reduce more perfectly than it did in its original composition.

(To be continued.)

MEASUREMENTS OF CHICAGO SCHOOL CHILDREN.*

(Concluded from p. 623.)

W. S. CHRISTOPHER, M.D.

Professor Pediatrics, Medical Department, University of Illinois; Professor Diseases of Children, Chicago Policlinic; Chairman Child Study Committee, Chicago Board of Education.

CHICAGO.

RELATION OF INTELLECTUAL AND PHYSICAL CONDITIONS.

As a result of his examination of 33,500 school children in St. Louis, in 1892, Dr. W. Townsend Porter concluded that there is a physical basis of precocity; that dull children are lighter, and precocious children heavier than the average child; that mediocrity of mind is associated with mediocrity of physique. At the outset of my observations I determined to reinvestigate Porter's proposition, and have to say that such facts as we have been able to collect go to confirm it.

There were met, in the course of these examinations, 503 children, aged 12, who were distributed throughout the grades from the second to the eighth, inclusive. A few were also found in the high schools. The physical peculiarities of these children, in each of the points examined is set forth graphically in the following charts. In these figures the averages of each particular measurement of the children of this age in each grade are taken, in the belief that with the small numbers, averages are closer to the truth than means.

Fig. 29 represents the average height of all of the 12-year-old children in each of the grades. It will be noted that the curve representing these averages rises with striking regularity from the second to the seventh grade. A slight decline is noticed in the eighth grade, probably due to the small number of children found in that grade. The grading of the pupils is upon an intellectual basis, hence the chart shows superior intellectual capacity is associated with superior stature, and inferior intellectual capacity with inferior stature, the age being the same throughout.

Figs. 30 to 33, inclusive are constructed in a manner similar to that employed in drawing Fig. 29, except that each is based on a different physical measurement, as indicated on the figure. In constructing these, the 12-year-old children alone have been charted, for the double reason that a single line is more illustrative, and because children of this age are more widely distributed through the grades. The other ages have been examined sufficiently to show that the laws here illustrated hold good for them. The close correspondence between the curves of height, weight, strength of grip, and vital capacity is very striking. The slight variation in the ergographic curve should not be considered until the

examination of a larger number of pupils determines whether or not it is accidental.

My observations, therefore, so far as they go, support Porter's conclusion: that superior mental and physical qualifications are generally associated, and inferior mental and physical qualifications are likewise generally associated.

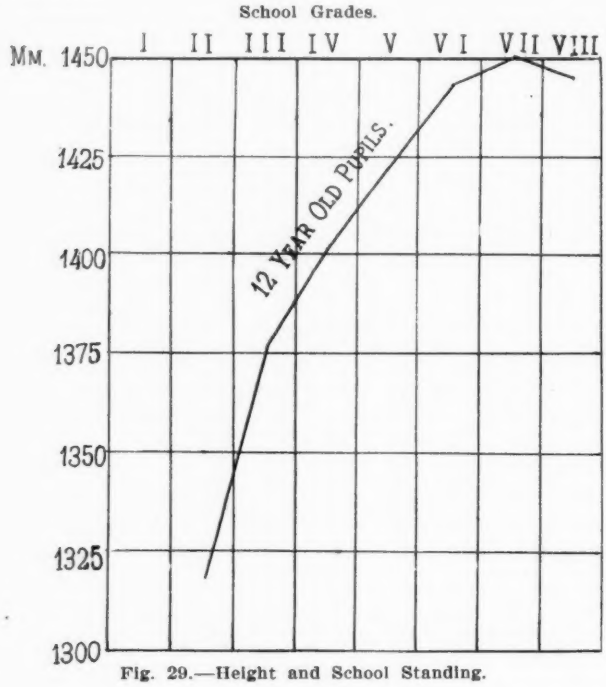

Fig. 29.—Height and School Standing.

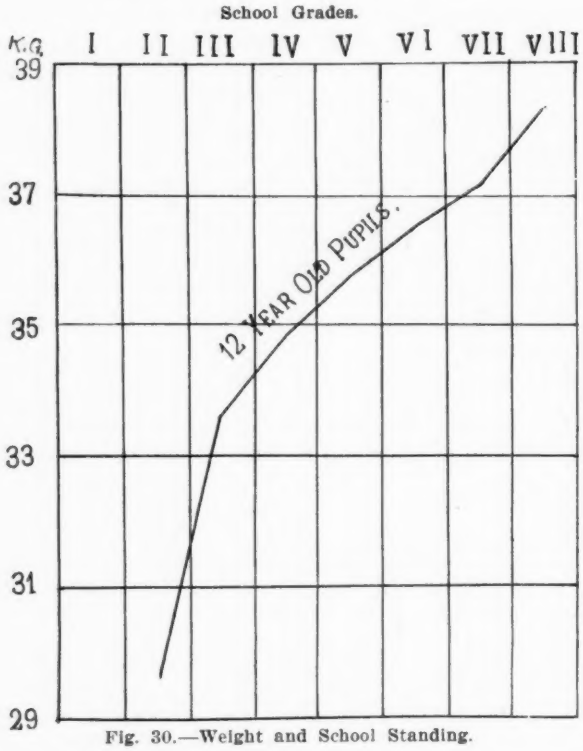

Fig. 30.—Weight and School Standing.

PHYSICAL EXTREMES IN EACH ROOM.

Figs. 34 to 38 illustrate the extreme maximum and minimum measurements met with in each of the twenty-four rooms at the Alcott school. From Fig. 34 it appears that the difference in height between the tallest pupil in the first grade and the shortest pupil in the eighth grade is very slight, being, in fact, only 18 mm., or less than three-quarters of an inch. The greatest range of stature is found in one of the fifth-grade rooms, and amounts to 530 millimeters, or 21 inches. These facts I have used in the Board of Education as an argument for the use of adjustable desks. The chart of extremes in weight shown in Fig. 35, as might be expected, is more irregular than that of extremes in

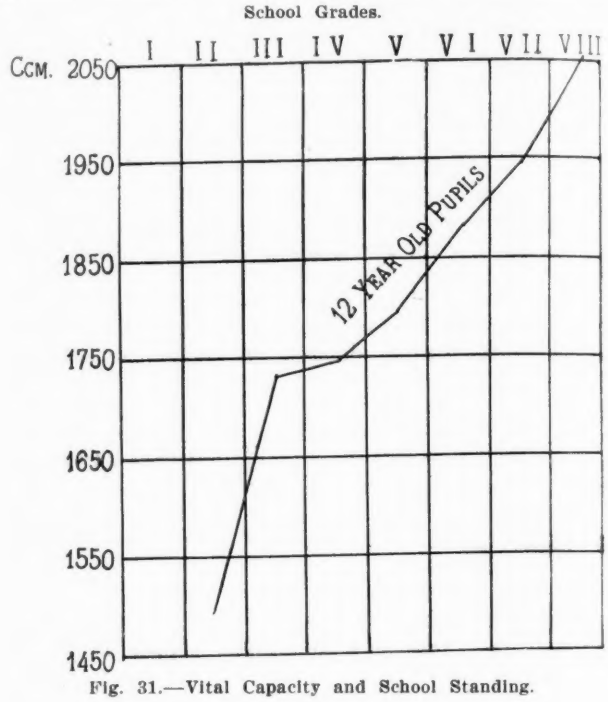

Fig. 31.—Vital Capacity and School Standing.

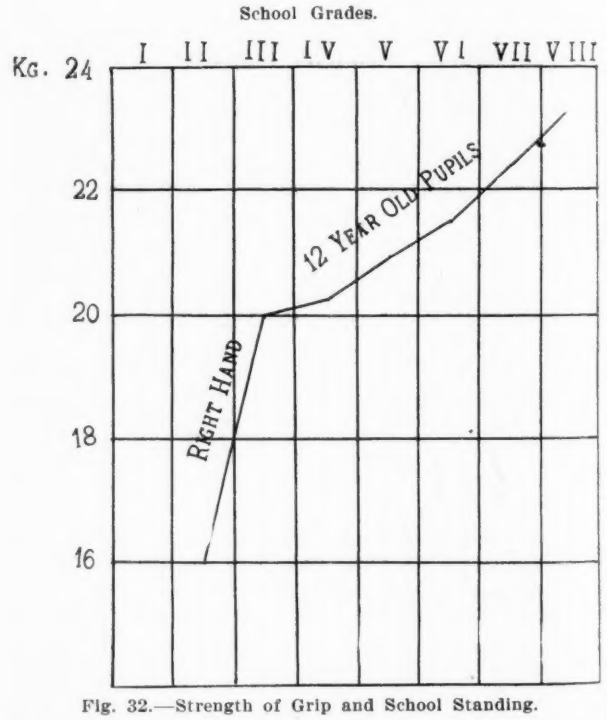

Fig. 32.—Strength of Grip and School Standing.

height, since obesity and slenderness are nutritional manifestations dependent on several other factors than those concerned in the determination of stature.

The extremes of ergographic work shown in Fig. 36 are very instructive. In the first grade the minimum endurance is 28.3 per cent. of the maximum endurance. This percentage continuously decreases until the sev-

enth grade is reached, where the minimum endurance is only 18 per cent. of the maximum, and in the eighth grade it is 18.5 per cent. The actual differences are even more striking than these relative differences. A glance at the chart shows that the minimum endurance

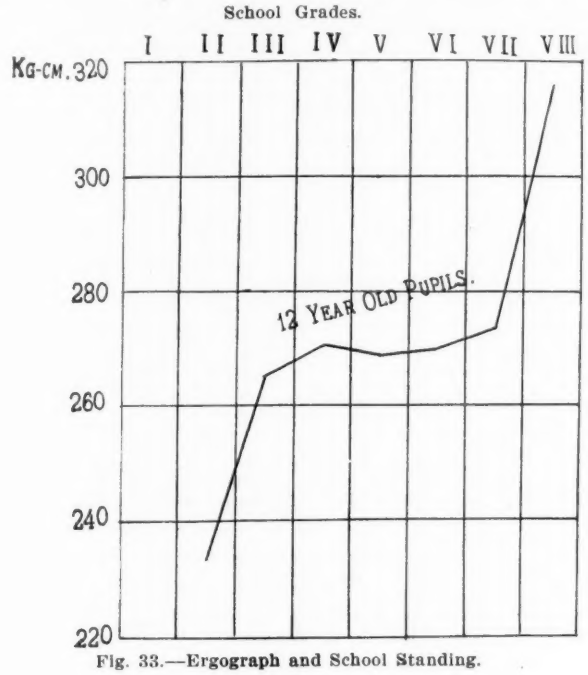

Fig. 33.—Ergograph and School Standing.

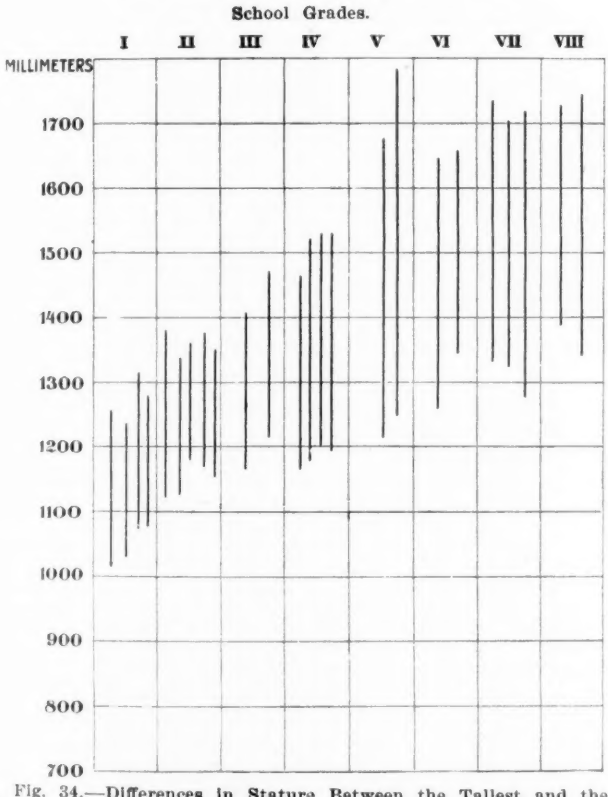

Fig. 34.—Differences in Stature Between the Tallest and the Shortest Pupil in Each Room of the Alcott School.

is almost the same in each of the grades, while the maximum endurances differ widely from each other. Figs. 37 and 38, giving extremes in strength of grip and in vital capacity, show essentially the same conditions as those found in the other charts of extremes. The most striking fact shown by these charts is the increase in the range of the extremes as we advance through the grades. Even before the causes of this increase in the range of the physical extremes in the upper grades is determined, the fact itself calls for greater elasticity in the work of those grades.

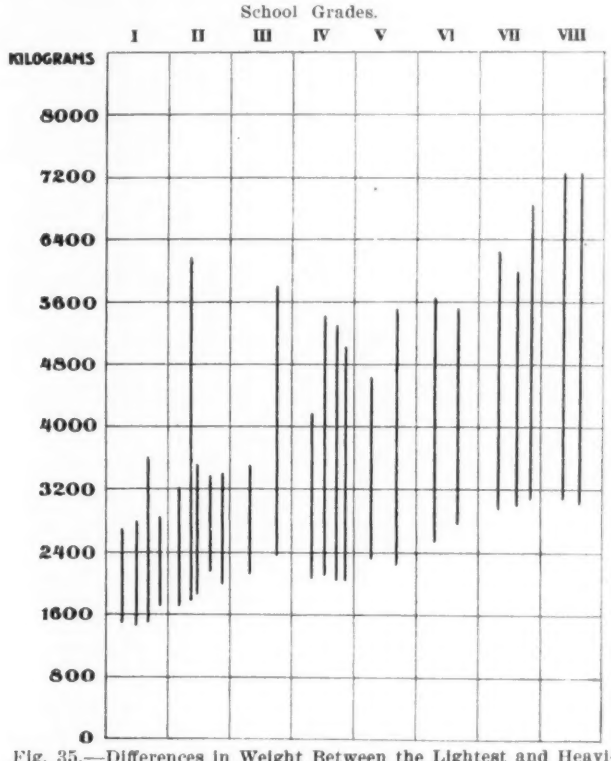

Fig. 35.—Differences in Weight Between the Lightest and Heaviest Pupil of Each Room of the Alcott School.

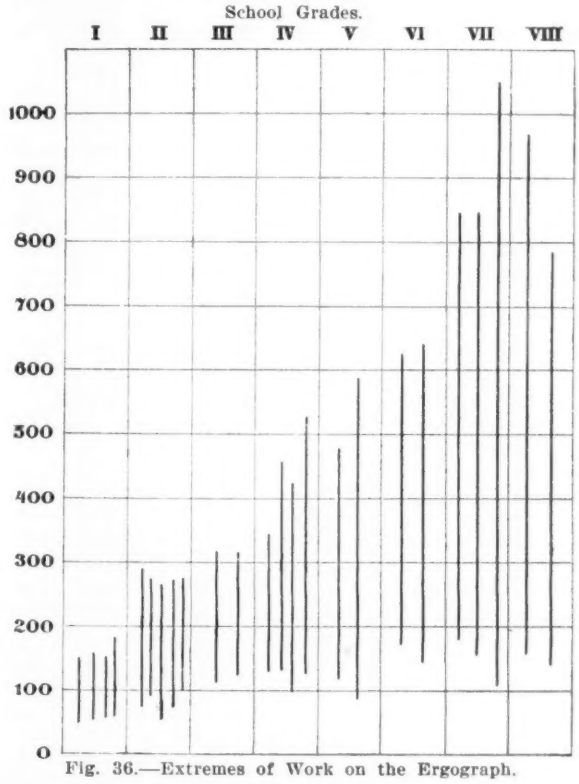

Fig. 36.—Extremes of Work on the Ergograph.

At present the work in physical culture in the schools is done by rooms, and the rooms are graded on an intellectual basis exclusively. This is, on its face, bad for the work in physical culture, but how bad it is could not

be known until such facts as furnished by these tables of extremes had been worked out. If physical culture is to accomplish the most possible for the pupils of our

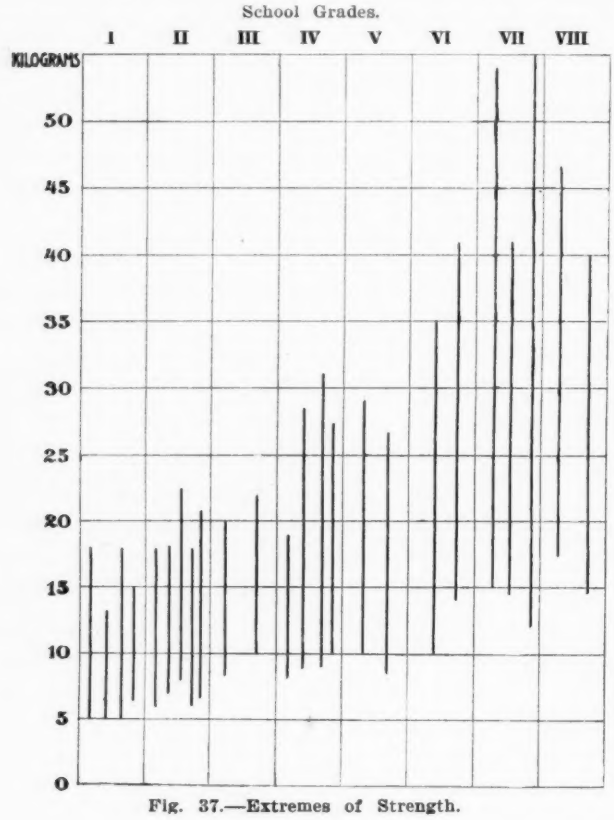

Fig. 37.—Extremes of Strength.

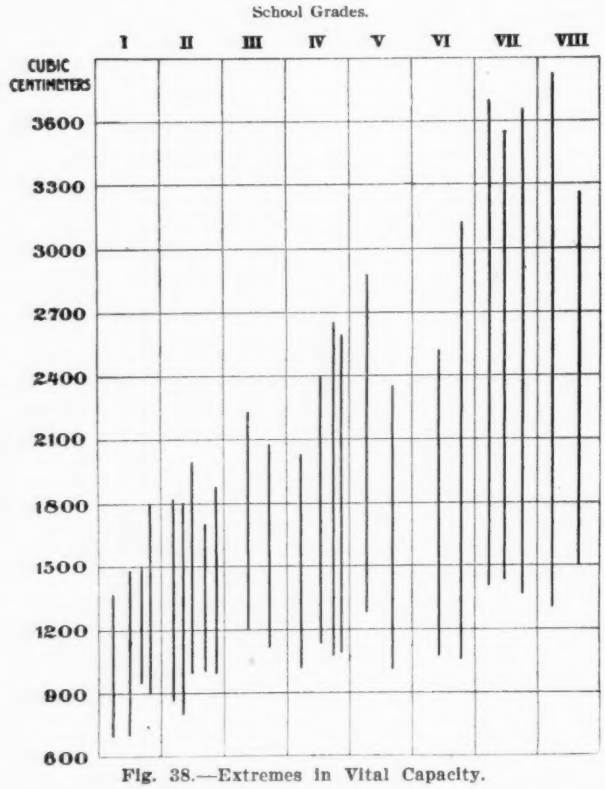

Fig. 38.—Extremes in Vital Capacity.

schools, its classes must be graded on a physical basis and its work adapted to the needs of the pupils.

VISION.

From the work in vision done in the Chicago schools during the past year I select only the matter shown in Fig. 39. In this figure are charted the percentage of pupils of different ages having defective vision. The

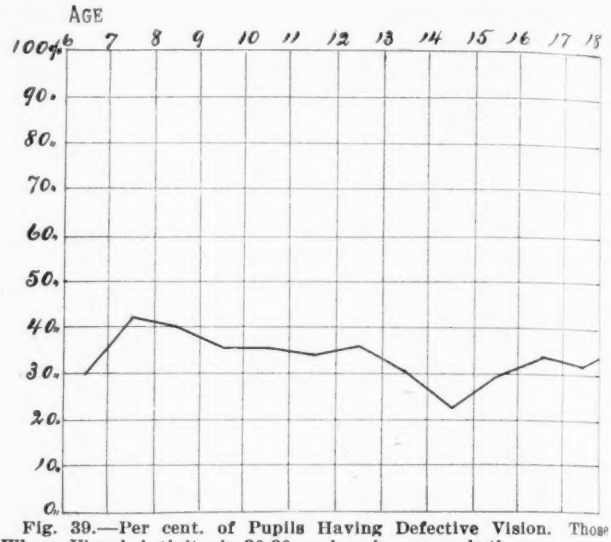

Fig. 39.—Per cent. of Pupils Having Defective Vision. Those Whose Visual Activity is 20-30 or less in one or both eyes.

Age.	Number tested.	20/30 or Below, in one or both eyes; per cent.	20/40 or Below; per cent.	20/70 or Below; per cent.	20/200 or Below; per cent.
6	264	32	7	1	0
7	363	35	8	2	1
8	351	38	13	3	1
9	343	44	17	6	1
10	364	43	18	9	2
11	385	41	17	8	2
12	364	36	16	9	2
13	373	30	14	9	2
14	450	32	14	9	3
15	521	32	15	9	3
16	475	32	16	11	4
17	339	32	16	12	4
18	173	32	16	10	8
Total tested	4765				

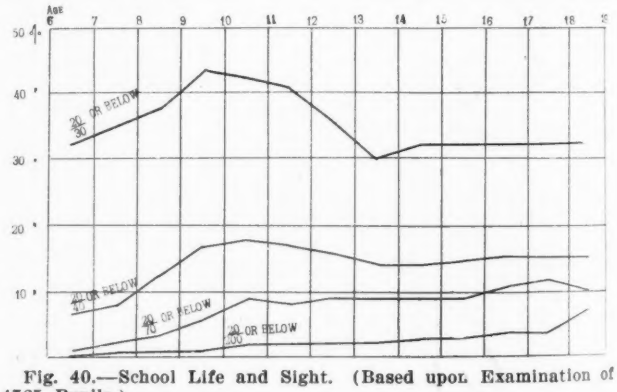

Fig. 40.—School Life and Sight. (Based upon Examination of 4765 Pupils.)

This figure differs somewhat from Fig. 39. It shows that the visual acuity diminishes during the first three years of school life, instead of only during the first year as indicated by Fig. 39. The improvement of vision at puberty, however, is still found to hold good.

Figure No. 39 is based upon the examination of about 1600 pupils. Since this chart was made the results of the examinations of the eyes of 4765 pupils in the Chicago Schools have been compiled. These results are shown in the following table, which gives the number of pupils of each age examined, and also the percentages of those in whom the visual acuity in one or both eyes was 20-30 or lower, 20-40 or lower, 20-70 or lower, and 20-200 or lower. The figures of this table are graphically shown in the accompanying Fig. No. 40.

acuteness of vision was tested by Snellen's charts, and for the purposes of our present chart those pupils are classed as defective whose vision is twenty-thirtieths or below in one or both eyes. On this basis it is found that 30 per cent. of the 6-year-old children have defec-

tive vision, a percentage which rises to 42 at 7 years, dropping slightly immediately thereafter, and remaining essentially unchanged until the age of 12, where it is 36 per cent. Then comes a sudden drop to 23 per cent. at 14, with a return at 16 to the previous general standard. This chart certainly negatives the generally accepted idea that continued school life impairs the vision. I have no explanation to offer for the sudden impairment of vision between 6 and 7. The increased acuity of vision at 14, reaching a point of greater acuteness than is found even at 6 years of age, is so closely connected in time with the changes incident to puberty that it does not seem unwise to consider it as one of the conditions belonging to that period of florid growth and development.

BACKWARD CHILDREN.

It is in the study of backward children that the lines of thought of the schoolmaster and childrens' physician come together most intimately. In every large school system there is to be found a considerable number of pupils who are too backward mentally to keep up with their classes, or, indeed, to even drag along, and whose presence in the class rooms with normal children serves only to retard the latter without appreciably benefiting themselves. They are, however, not sufficiently backward to warant putting them in the state institutions for the feeble-minded. The defects from which these children suffer, and to one or more of which, in each individual child, is to be traced the cause of its intellectual deficiency, may be classified as follows:

DEFECTS FOUND IN BACKWARD CHILDREN.

Location.	*Kind.*	*Cause.*
Sensory tracts.	Structural—	Heredity—
Central Nervous System.	Developmental.	Environment.
Motor tracts.	Acquired.	Nutrition.
	Functional—	Infection.
	Developmental.	Climate.
	Acquired.	Dwelling.
		Clothing.
		Physical activities
		Mental activities.
		Discipline.
		Traumatism.

Diagnosis of a backward child consists in:

1. Determining the defects present—sensory, motor, or associative.

2. Determining the kind of defect—structural, functional—developmental, acquired.

3. Determining the causes of these defects—heredity, nutrition, infection, and other environmental factors.

In making such diagnosis it is evident that there is required the services of the practical pedagogue, the psycho-physiologist, and the medical man. So also in the management of the cases the practical knowledge of both educator and physician must be brought to bear. Moreover, they must work in consultation and not at long range. The close relationship between medical and educational work is thus readily seen in the management of the backward child. A moment's consideration will also show that this relationship is equally close in the management of all other children. While the physician and educator are ready to meet and combine their efforts on behalf of the child, it is unfortunate that the moral teacher seems not yet ready to come in to complete the trio.

A large part of modern education is devoted to processes of developing the senses, and the motor functions. From the natural limitations of his methods of work, however, the schoolmaster is often unable to have his subject in the best condition to profit by his methods. He can not fit spectacles, he can not remove adenoids, he can not supply deficiencies in food, whether quantitative or qualitative, he can not remove toxic influences. Some of these things the physician can do. These remarks on the subject of backward children, apparently somewhat remote from the subject-matter of this paper, have their reason in the results of an examination of twenty backward children in one of the Chicago schools last spring. These children were gathered together into a so-called "ungraded" room. There were sixteen boys and four girls. The average age of the boys was 11 years, 5 months, and 10 days; that of the girls was 10 years, 4 months, and 21 days. A number of developmental defects was noted among these pupils, which would suggest imperfect formation of the brain. Two are marked as being microcephalic, their heads being below normal in size. Seven of the twenty are recorded as having cranial asymmetry; eight as having asymmetrical faces. Six are noted as having peculiarly formed ears, and nine as having narrow, high, or imperfectly formed palates. Five of the pupils had decided eye defects, the visual acuity being twenty-thirtieths or lower, while thirteen had hearing so defective in one or both ears as to place them at a disadvantage in school work. That is, 60 per cent. reached a subnormal point in hearing, to which only 24 per cent. of the Alcott school pupils of the same age fell. Malnutrition was shown by marked anemia in two of the pupils. Want of muscular tonicity was noted in seven. The nervous ergographic tracings with most of these children and the small amount of work done on the ergograph by them would indicate the same condition.

The averages made by these pupils was lower in every particular than the averages made by the Alcott school pupils of the same age, as will appear from the following table:

Comparison of the averages made in the tests by the pupils of the ungraded room with the Alcott School averages, reduced to the same age.

	Net Height. mm.	Height Sitting. mm.	Weight. kg.	Work on Ergograph. cm. kg.	Combined Strength of Hands. kg.	Vital Capacity. c.c.
Girls of ungraded room	1,274	692	27,325	100	23.8	1,375
Alcott School normals for the same age	1,323	704	29,033	180	24.4	1,444
Boys of ungraded room	1,362	724	30,880	206	32.4	1,762
Averages for same age at Alcott School	1,378	727	31,888	261	34.6	1,763

Signs of Pancreatic Affection.—Scherschewsky has noticed that hypertrophy of the pancreas consecutive to that of the spleen compresses the abdominal aorta and causes a murmur below. Pain in the stomach region immediately after eating is another symptom of a pancreatic affection, and also reflex pains from compression of the nerve roots, such as the girdle feeling and cramps at the neck of the bladder. There is also a palpable pulsation in the stomach region, accompanied by distress and palpitation. His article is published in full in *Vratch*, No. 38.

Gutzeit Test for Arsenic in Urine.—One c.c. of urine is mixed with 4 c.c. sulphuric or hydrochloric acid, a bit of sugar added, the tube plugged with cotton and covered with a piece of filtering paper moistened with silver nitrate. It is then set aside in a dark place. If there is arsenic in the urine a yellow spot will develop on the filtering paper, its size and intensity indicating the proportion of arsenic in the urine. Blumenthal, of the Moscow Institute for Bacteriology, endorses this test as absolutely certain and accurate.—*Derm. Cbl.*, August 1.

Army Surgeons Required.—The Surgeon-General of the Army announces that 100 additional medical officers—acting-assistant surgeons—are required for duty in the Philippines and China. Only experienced graduates of reputable medical colleges, under forty years of age will be accepted.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

61 Market Street : : Chicago, Ill.

Cable Address: "Medic, Chicago"

Subscription price: Five dollars per annum in advance

SATURDAY, SEPTEMBER 15, 1900.

FINSEN'S PHOTOTHERAPY.

Finsen's investigations of the therapeutic and other properties of light have been followed with a great deal of interest. In Copenhagen a public institute, founded by public and private means, has been in operation for some time and a great deal of work has been done, especially in the treatment of lupus and other cutaneous diseases, with concentrated light. Patients have been attracted from various European countries and from America; similar institutes are being or have been established in London, Moscow, and elsewhere. Medical men have visited Finsen's institute in Copenhagen, and the reports are unanimous in their praise of the well-known Danish open-handed hospitality, and of the true scientific spirit of Finsen and his assistants. The result of this treatment of lupus vulgaris is certainly satisfactory. Inasmuch as this is a new and striking departure in therapy, surely destined to grow in importance and usefulness, it may be as well to point out briefly some of the steps in its development.

In 1893 Finsen proposed a new treatment of variola. The patients were placed in a room from which the chemical or actinic rays of the solar spectrum were excluded by the use of red glass or red curtains. When patients with smallpox are so treated from an early period of the disease, the vesicles do not become pustules, suppurative fever is absent, and there is but little or no variolous pitting. At first this announcement was received with more or less incredulity, but it has been confirmed from various sources, and there is not the slightest doubt that the exclusion of the actinic rays greatly mollifies the course of smallpox.[1] Arrangements to carry out this treatment should be made in all our smallpox hospitals. Let it be remembered, however, that it must be instituted early in the attack, and before the pustular stage.

How is this action explained? The actinic rays all come from the blue and violet end of the spectrum; their action is largely chemical and they produce but little heat; in contradistinction from the rays from the other end of the spectrum—the red rays—whose action is principally heat-producing. All are familiar with the effects of solar and other forms of light on the skin when unduly exposed. The changes vary from increased pigmentation to violent and complex forms of dermatitis. Finsen and others have demonstrated that it is the actinic, and not the caloric, rays that cause these changes in the skin. This being the case, it is only natural to look for still greater morbific action on the part of the actinic rays on skin already diseased, as in smallpox; and the beneficial effect of excluding the ultra-violet rays shows this to be the fact. Consequently, the mechanism of the action on the skin of actinic rays, their influence on the chromatophorous cells in lower animals, and other interesting physiologic facts and phenomena need not be discussed at this time. We see that this method of treating smallpox, at first somewhat strange and incomprehensible, has a fairly solid scientific basis. So far, exclusion of the actinic rays in treatment of variola has not been found to have any general injurious effects on the patients.

Finsen's studies of light as an agent of excitability[2] have shown that here again it concerns principally the action of the actinic rays; these rays determine in a very pronounced manner certain movements in lower animals. These rays are therefore quite certainly carriers of energy of great biologic importance. In addition to heat and to light, the rays of light also bring chemical forces which have not received much special attention in medicine. These forces certainly merit careful study. Singularly enough, Finsen, who called attention to their noxious effects—and the treatment of smallpox by exclusion of the actinic rays resulted—is also the one to introduce the treatment of other diseases by exposure to actinic rays. Sun-baths are not new; they have been employed in various forms since antiquity. Even baths in blue light have been used. Finsen[3] notes the work of an American by the name of General Pleasanton, who utilized blue light in diverse ways for its effects on growing plants, and also in the treatment of disease. Pleasanton published a book, printed on blue paper, entitled: "The Influence of the Blue Ray of the Sunlight, and of the Blue Colour of the Sky, in Developing Animal and Vegetable Life, in Arresting Disease, and in Restoring Health in Acute and Chronic Disorders to Human and Domestic Animals."[4] Here the remarkable chemical qualities of the blue rays are magnified into a panacea.

Finsen's treatment of lupus vulgaris is based on the bactericidal power of light. Theoretically, light should have good effect on superficial cutaneous processes of bacterial origin; but the bactericidal action of light is slow, and on that account he uses mirrors and lenses to concentrate the rays at the same time as the ultra-red, the red, the orange, and the yellow rays are excluded, because when concentrated these rays would cause a burning or necrosis of the tissues. Thus the most actively bactericidal rays, namely, the blue, are allowed to play on the diseased tisues for a considerable time each day. While the sun is the best source of light, it is not always available, and in that case electric light is

1 See references in "Finsen, La Photothérapie." Paris. 1899.

2 Loc. cit., 57-84.

3 Loc. cit., p. 68.

4 Philadelphia, 1877.

used. By experience it was found that concentrated light kills bacteria many times more rapidly than diffuse light. Without going into practical details, suffice it to say, that a large number of cases of lupus vulgaris have been cured by phototherapy at Finsen's institute after a prolonged treatment, and that the amount of scarring is only moderate. The method is beginning to be used in other cities and it is probable that its use will be extended to other diseases.

PERNICIOUS ANEMIA.

Despite the time and industry that have been expended in the study of so-called pernicious anemia, the true character and the intimate nature of the disease yet await elucidation. The most plausible explanation as yet propounded is that the disorder is a toxic process, although it has not been shown that it is dependent upon any known substance introduced from without, and it is not unreasonable to suspect that it may result from some obscure derangement in metabolic equilibrium—an autointoxication—and therefore of cellular origin. In no other way, scarcely, would it be possible to account for the variations in the course of the disease, the constancy of its symptoms, and generally its progress to a fatal termination. If this hypothesis prove to be correct, the interesting and important question will then arise as to whether we can hope to obtain a cellular or other product capable of neutralizing the evil effects produced, or of replacing the lost activity. Meanwhile, any addition to our clinical and pathological knowledge with relation to the disease must be cordially welcomed. In a communication presented at the recent meeting of the Association of American Physicians, Cabot[1] reports the results of an analysis of 110 cases of pernicious anemia in which the diagnosis was based in 19 on evidence yielded by autopsy—in addition to clinical investigation—in 60 on the presence of typical symptoms, signs, blood-examination and course, with a fatal termination—without autopsy—in 31 on the same phenomena except a fatal termination. Of these cases, 57 occurred in males and 53 in females.

The majority of patients came under observation after the 40th year, and only 28 earlier. No typical case was observed in a patient under 9 years of age; 63 were between 40 and 60, 19 over 60, 4 over 70, the oldest being 79. In 4 cases the symptoms set in immediately after parturition or during a previous pregnancy, and in 14 at the time when the menopause was expected. No definite relation with syphilis or internal parasites was noted in any case. A history of tertian malarial fever was given in 4 cases. Hemorrhage was a symptom in 37 per cent. of cases. Two cases were complicated by diffuse nephritis. No relation to carcinoma was noted in any case. Psychic factors were prominent in 3. The earliest and the most common symptom was muscular weakness. Next in frequency was pallor, in the majority with a yellow cast. Then, in the order of frequency followed dyspnea and gastric symptoms—nausea or vomiting. In more than half of the cases the gastric symptoms occurred paroxysmally, with intervening periods with relatively good digestion. Lack of appetite was complained of in not more than two-thirds of the cases. Swelling of the lower extremities was fairly constant, although relatively late. Palpitation was less complained of than dyspnea. In most cases functional heart-murmurs were present. In 17 there was evidence of mitral regurgitation and in 6 enlargement of the heart. The condition of the bowels was abnormal in the majority of cases. In 43 there was diarrhea, in 32 constipation. Vertigo was present in about one-half of the cases, headache in 34; ringing in the ears in 30, and signs and symptoms suggestive of changes in the spinal cord in 31. Difficulty of vision was mentioned in 20 cases. Retinal hemorrhage was found in 15 of 36 cases examined. Enlargement of the liver was present in 30 cases, and of the spleen in 13 cases. Evidence of emaciation existed in about one-half; elevation of temperature, in about two-thirds; albuminuria in 23, with tube-casts in 21. The urine was usually pale in color or normal. Only twice was it dark. The importance of making repeated examinations of the blood in doubtful cases is emphasized on account of the variability, from day to day, and a description of the blood conditions during remissions is given. When the red blood-corpuscles begin to increase in number, the color-index may remain high or become even still higher. As a rule, in the remissions the color-index is relatively low. Under the former conditions there may also be slight leucocytosis, made up largely from an increase in the polymorphonuclear neutrophiles and probably due to increased activity of the bone-marrow. At the same time, the percentage of lymphocytes diminishes, and the myelocytes disappear. The number of megaloblasts steadily decreases, and they are for a time replaced by normoblasts, although these also soon disappear. The size of the individual red cell is greater at some times than at others, but soon it becomes normal or subnormal. Abnormal staining reactions and oval forms disappear. The number of red cells falls to about the level of three million.

The following features are considered distinctive in the diagnosis of pernicious anemia: 1, a slow, insidious onset, without recognizable cause; 2, remarkable freedom from pain; 3, striking absence of emaciation—in most cases; 4, the frequent presence of symptoms suggestive of disease of the spinal cord; 5, paroxysmal attacks of diarrhea and vomiting occurring without any obvious relation to diet or to treatment, preceded and followed by periods in which digestion and absorption are performed without apparent difficulty; 6, the tendency to marked spontaneous improvement in all of the symptoms, followed by rapid and inevitable relapse:

1 American Journal Med. Sciences, August, 1900, p. 139.

7, a reduction in the red corpuscles to a point below two million per cmm., without a corresponding reduction in the hemoglobin; a reduction in the number of leucocytes, and especially in the number of polymorphonuclear neutrophiles; the presence of large numbers of over-sized, well-stained red corpuscles, some of them containing nuclei—megaloblasts—together with a tendency to abnormal staining reactions, and to an oval shape in the red corpuscles. On the other hand, the following features are considered distinctive of the secondary or symptomatic anemia; 1, the presence of a well-recognized cause; 2, the steady progress of the symptoms, especially in cases of malignant disease; if gastrointestinal symptoms are present, they seldom improve spontaneously; 3, emaciation; 4, a relatively low percentage of hemoglobin, while the number of leucocytes, especially the polymorphonuclear neutrophiles, is likely to be increased, though by no means invariably. The size of the individual red cells is usually normal or diminished, and their centers are strikingly pale. Over-sized red corpuscles may be present, and may occasionally contain nuclei, but, as a rule, they are greatly in the minority, and such nucleated red corpuscles as are present are chiefly of the normoblastic type. The tendency to abnormal staining-reactions and to an oval shape in the red corpuscles is usually much less marked than in cases of pernicious anemia. Latent gastric carcinoma is practically the only disease likely to be confounded with pernicious anemia.

Of 90 of the cases, only 20 were progressive in course. In 70 there were one or more remissions, with great improvement, disappearance of the symptoms for the most part, while the color-index and the blood-count became nearly or quite normal. Emphasis is placed on the fact that pernicious anemia is not a progressive disease, but is attended with successive waves or paroxysms of alternate remission and exacerbation, for the most part without reference to treatment. Of 70 cases observed from beginning to end, the majority lasted less than two years, 12 more than three, 2 more than four, and the longest, five years. The number of relapses varied from 2 to 5 or 6. Out of the whole series, there was no case of genuine recovery. In treatment, Fowler's solution of arsenic, bone-marrow, and inhalations of oxygen were used, as well as laxatives or purgatives, but no good results are attributable to them.

PRIMARILY MULTIPLE PROLIFERATIONS OF BONE MARROW—MYELOMA.

The bone-marrow is a complex structure harboring many different kinds of cells and performing a corresponding number of varying and but little understood functions. On account of its hidden and well-protected situation, the bone-marrow generally escapes observation and hence the knowledge of its pathologic changes is not as widely spread as of the changes of more accessible tissues. In addition to the changes that occur in pernicious anemia and other blood diseases, primary and secondary, and to inflammatory and suppurative processes, bone-marrow may be the seat of tumors of various kinds, both secondary as well as primary; but the clinical and anatomical relations of the primary forms are probably not yet fully worked out. In addition to myelogenous sarcoma, with its interesting giant cells, and to endothelioma, there occurs a primarily multiple, primary tumor growth of the marrow of certain bones, especially the vertebræ, the ribs, and the skull-cap, that is, the red marrow of adults. So far, this tumor has not been found to develop from the normal yellow marrow of the long bones. The new tissue resembles red marrow in its general appearances, and it gradually replaces the bony tissue, causing more or less diffuse, as well as nodular enlargements of the affected bones; occasionally it breaks through the periosteum and forms small infiltrations outside of the bones, but on the whole the tumor tissue is closely confined to the marrow, from which it can not be distinguished. The ribs not uncommonly undergo spontaneous fractures, and sharp curvatures may develop in the spine, as in a case recently described by Winkler,[1] which developed after a fall of about six feet. Similar curvatures also develop in the sternum, which may become greatly thickened and swollen. In nearly all cases—Winkler insists that so far, in every case—the external organs have been free from metastases, the growth confining itself strictly to the bones. In the case described by Herrick,[2] however, there is a record of double ovarian tumors of the same structure as the infiltrations of the marrow. This case seems to have been an extremely well-marked example, and there is no apparent reason why metastases may not occur, especially in the latter stages of such luxuriant proliferations of the marrow as there described. The lymph-glands and the spleen are not enlarged. There develops a pronounced anemia, the exact character of which has not been studied sufficiently. And in the urine Bence-Jones' albumose has been observed by Kahler and Pick, Fitz, and others.

The microscopical structure of the new tissue is homologous with red marrow, in so far as the tissue consists almost wholly of round cells of the same size and with rather large nuclei; giant cells are not present, except for occasional osteoclasts in the Howship's lacunæ of the disappearing bone trabeculæ; fine fibrillæ and blood-vessels occur among the tumor cells. Wright[3] shows that a large number of the cells give the staining reactions of the plasma cells, being apparently derived from similar cells present in normal marrow.

It is clear that this tumor is peculiar and has a definite physiognomy. It should not be confounded with pseudoleukemia, lymphosarcoma, periosteal and myeloid sarcoma, or carcinoma of bones. From the homology of its structure with red marrow, v. Rustitzky, who

1 Virchow's Archiv, 1900, 161, 252-310.
2 Medical News, 1895.
3 Journal of Boston Society of Medicine, 1900.

described the first case, named the tumor myeloma, and this is the name the disease is destined to bear, although cases have been recorded under other and more misleading designations.

AN ADAMLESS EDEN.

The *Denver Republican* in a recent issue—August 26—analyzes some curious statistics of the population of that section, and comes to the conclusion that at present rates of progress Colorado will have before long only a feminine population. It says, with perhaps an excusable exaggeration considering the actual formidable figures it presents, that "though many more females than males are born in this state, there are two deaths of males to every death of a female." Hence, it foresees the day when Colorado will be an Adamless Eden, or very nearly one, for it is not expected that men will or can be kept out, in spite of the deadly effects of the climate or whatever else is thus affecting that region. The figures from the State Board of Health, which it quotes, show a range of from 30 to 70 per cent. excess of mortality of males over females each month of the present year, a ratio that would, if continued, soon exhaust the resident male population. How this comes about is hard to see, as no specially masculine pestilence is reported, but, of course, figures can not lie. The only suggestion that readily occurs is the proximity of Utah, but that state does not appear to be similarly suffering. The problem is left for solution to the local vital statisticians.

THE CENSUS AND MORTALITY STATISTICS.

Considering the fact that the increase of urban population is one of the tendencies of the time that troubles well-wishers of the race, and its outcome is looked on with some fearful questioning by economists, the insane ambitions of municipalities to exceed each other in population has a rather peculiar aspect. The revelations of the census have been a serious disappointment to many, and they already affect to some extent the health statistics of several municipalities, which suffer somewhat in the increase of their death-rate corresponding to the decrease of population from their estimate. It is probable that when the figures are fully in, some changes in this direction will be found to be quite general, though perhaps not extensive enough to materially affect the records. We notice a tendency to disregard the census figures in some quarters, the health officials claiming that they are in error. It seems to us that even if there is a possibility that such is the case it would still be better to follow them as the best accredited official records. The increase of death-rate would probably not be large in any case, and the data would be free from the suspicion that they had been affected or sophisticated through local feeling. A slightly too unfavorable record in this respect is better than the opposite; it has the advantage of being on the safe side and in such, as in many other matters, there is a certain power in understatement.

PATHOLOGIC ASEPSIS?

According to a German physician who recently spent some months in the Arctic region, the atmospheric conditions there have a very decided influence on germ infection and the behavior of wounds. When the air was clear and dry, putrefaction was arrested, and open wounds, though subject to constant irritation, did not inflame, but did not heal, nor show a tendency to form a scab. In damp, cloudy weather, on the other hand, mold and decomposition appeared and the slightest wounds inflamed and festered at once, though healing progressed rapidly after evacuation of the pus. A somewhat similar slowness of healing and irregular behavior of wounds have been noticed also by other Arctic travelers, and have been attributed by some to a scorbutic tendency thus manifesting itself. The fact, however, in the light of modern theories, suggests the notion that the healing powers of the system require the stimulus of germs and that an absolutely aseptic wound would go neglected and uncured. Even the most rudimentary form of inflammation may require a little sepsis for its start, and the old notion of "laudable pus" have at least a minute basis in fact. The idea is somewhat comforting on the whole, since it implies that absolute freedom from germs, so difficult to be obtained, may not be such a desideratum after all. Perhaps, when we have done our best we can console ourselves that we have left the little leaven of salutary irritation to stir up the organic processes of cure, and that this is as essential as the exclusion of the excess that would carry the process over the line of what we may call the normal pathology of reparative incipient inflammation.

SEA-WATER AND THE CELL.

A French physiologist, M. René Quinton, in a paper read before the last International Medical Congress maintains that all animal life, having first originated in the seas, still maintains for its cellular existence the same original environments; in other words, every organism, whatever its rank in the animal scale, is essentially a colony of marine cells. The first part of his proposition, that animal life had a marine origin, is sufficiently probable to be accepted; the primitive gill respiration, which he adduces as evidence, appears through the whole series of higher forms of animal life in its embryology, and all the simpler forms are of an aquatic type. The experimental evidences he offers of his main thesis are the successful displacement of all or the greater part of the blood of dogs by sea-water without causing death or damage other than necessarily due to the operative steps, and the persistence of the vitality of the white blood-corpuscles of all classes of organisms in the same medium, which he claims to have demonstrated. Lastly, he offers as evidence the identical chemical composition of the blood plasma and sea-water. The salts of the one are the salts of the other, seriating moreover in the same order of importance, viz., 1, sodium, chlorin; 2, potassium, calcium, magnesium, sulphur; 3, silicon, carbon, phosphorus, fluorin, iron, ammonia and iodin. Still further, he claims sea-water and blood contain in like proportion minute quantities of other elements, such as bromin, manganese, copper, silver, lead, lithium, etc. This may not be an absolutely novel conception; it may possibly have suggested itself to others, but we have not seen it put forward as fully and prominently elsewhere. It is suggestive in some

practical ways; sea-salt normal solution, or sterilized sea-water itself, may turn out to be the best restorative and it is still further suggestive in connection with the comparatively recent researches of Morgan, Loeb, and others on the parthenogenetic development of certain organisms in differently modified marine media. There is possibly a large field for study and work in the direction here indicated.

ERGOGRAPHIC TESTS IN SCHOOL CHILDREN.

The article by Dr. Christopher, published in this and the preceding issue of THE JOURNAL, treats of a subject that has a more than passing interest. The welfare of the child, and especially at the critical period of puberty, is an important matter and it is easily seen how faulty educational methods may have a damaging influence that will be felt through all the future life of the individual. Dr. Christopher has utilized the methods of modern physiologic research and has availed himself of the services of assistants skilled in instrumental psychologic experimentation, which would naturally add to the value of the observations. From this study he demonstrates already some facts that are suggestive, if not conclusive, such for example as that shown by the power curve through the school-day and the corresponding ergograms. It is apparent, at least, that the child needs more frequent respite from school duties than is always given by modern pedagogues. School-teachers are liable perhaps more than others to become opinionated and arbitrary, hence the need of their proper instruction on matters that concern the welfare of their charges. It would be well, therefore, could they generally study such articles as that of Dr. Christopher, which illustrates by graphic methods the effects of mental work on muscular and nervous endurance. At present we have a strong suspicion that some popular teaching methods are unphysiologic and liable to produce serious effects by the overstrain of immature and, therefore, especially vulnerable organizations. The paper we publish is essentially a preliminary one, as the investigation is still being carried on. That it involves a possibility of important and beneficial results needs hardly to be stated.

MYOSITIS OSSIFICANS.

The calcareous degeneration of certain tissues is a well-known fact, but the formation of true bone in the tissues, not normally thus developing, and apart from any direct connection with the natural bony growths, is still to some extent a pathologic curiosity. This is especially true of the ossifications of the muscles, of which a comparatively small number of cases have been reported in medical literature. Dr. Lydia M. Dewitt reports[1] a case, with the discussion of the literature of this subject, in part honestly acknowledged as second-hand, with the theories that have been proposed to account for the condition. The fact that in certain animals the so-called splint bones occur has a certain physiological bearing, but the facts do not fully apply to the human subject. The curious malformation that has been observed in some 75 per cent. of the recorded cases of this disease of microdactylia and imperfection of the thumb and great toe is of interest, and is one of the unexplained but indefinitely suggestive peculiarities that we sometimes meet with in connection with obscure diseases. Dr. DeWitt's idea seems to be that on the whole the condition is not so mysterious a one as might be supposed. The fact that different members of the connective-tissue group change with special readiness into other forms of connective-tissue structure is, she holds, a probably sufficient explanation, lacking others a little more definite. She does not consider the suggestion of Gegenbaur, of specialized osteoplastic nuclei existing from before birth, as necessary to account for the pathologic bone formation. The cells which in certain regions act as osteoblasts are not, she thinks, necessarily histogenetically different from those which in other localities develop into fibrous connective tissue. The subject is by no means definitely cleared up, but her communication is a reasonable discussion of the facts and probabilities.

1 American Journal of the Medical Sciences, September.

THE DISASTER AT GALVESTON.

The terrible disaster at Galveston, the reports of which have as yet only partially reached us, seems likely to be one of the worst on record, exceeding even Johnstown in loss of life and property. If commercial reasons make it inevitable that we shall build our cities where they are subject to such disasters as those that have twice afflicted Galveston, it would seem necessary that some special measures should be taken to ensure their protection. The building of houses directly in the sand, where they are liable to be flooded, appears to court disaster, and the chances for such a hurricane, even only once or twice in a century, should be kept in mind. The results of the catastrophe, aside from the direct mortality, are most serious, as there is said to be an immense number of injured and maimed, and the sanitary conditions, as in Johnstown and Titusville, following such a flood require thorough and immediate attention. This is a matter of more importance in the latitude of Texas than it would be farther north. More than this, the survivors, in their wrecked and dismantled homes, are exposed to still other perils and hardships, the water-supply is cut off, and, hence, the dangers of fire and of a water famine are also imminent. With all these things to affect the health, there is yet the moral effect of such a catastrophe, which can not well be estimated, but which can only be a factor in the total outcome of the misfortune. The revival of the city is, we trust, beyond question; and the injury it has received we hope may prove to be only a temporary one. It should and will have the active sympathy and aid of more fortunate sections of the country. It is to be hoped that engineering skill will, in repairing the mischief that has been done, find a way to insure against a repetition of the calamity.

THE LATEST DECREE OF THE ANTIVIVISECTIONISTS.

Among the numerous Congresses held in Paris during the past summer, there was one called the International Congress of Animal Protection Societies. While not ostensibly in the interests of the antivivisectionists, it was evidently captured by them. A resolution was introduced stating that "vivisection is a crime unworthy of the toleration of any people calling themselves civilized." A separate vote was taken of the anti-cruelty societies,

and in them it was voted down, as they simply worked to restrict, not to abolish vivisection. The vote of the antivivisection organizations, which predominated in the Congress, was, however, so overwhelming that the resolution was carried by a majority of about two to one, so that, as one John Vedder, M.D., whose statement of the facts we follow, holds the "minds of the International Congress of Animal Protection Societies was for the total prevention of vivisection." This he claims as a great victory. The meeting was apparently an obscure one, as we have seen no mention of it elsewhere than in this communication to the *Boston Transcript*, but it is of sufficient medical interest to be mentioned here; it is well to know what the enemy is about. If the antivivisectionists and zoöphiles can so have their way, they will in time make it a greater crime to sacrifice an animal for the benefit of mankind than to murder one of their own species. Human life is little regarded by their co-believers in India, who butchered Englishwomen in Cawnpore, and the prejudices of the Hindoo population in this direction have created some of the most serious obstacles to the successful combating of the plague amongst them. The European and American antivivisectionists seem really little more open to reason than are their Asiatic confrères, and they certainly show a like intolerant spirit. There is nothing so inhuman as idolatry, and the individual who sets up a fad as his divine image and demands that others as well as himself shall bow down to it, is, in his way, as benighted a pagan as Nana Sahib or the Chinese Boxer of to-day.

A UNIFORM CLASSIFICATION FOR HEALTH STATISTICS.

Elsewhere in this issue—on page 705—will be found a brief report of the late session of the International Congress of Hygiene and Demography and its action regarding an international classification of diseases. The advantages of such an universal system are obvious if the data are to be utilized, and it may be that the Paris classification adopted is a good one for this purpose. It is not above criticism, however, for it appears to us, as given in the mortality reports in the Paris journals, as deficient in several respects. The only forms of nervous disorders included are: cerebral hemorrhage and congestion, paralysis, softening of the brain and simple tuberculous meningitis, that is, if we accept the classification as published in the Paris medical journals. It is possible that the arrangement is extended in the original records and the 15 or 20 per cent. of "other causes of death" lump together many cases of tabes, paresis, epilepsy, angina pectoris, and various other affections from which Parisians are certainly not exempt. Unless this is the case, and we can only assume that it is, in these and some other respects some of our American municipal classifications appear preferable, and it is to be feared that the recommendation of the Congress will not at once be universally accepted. The fact that it was composed, to a large extent, of laymen and that the largest number of medical delegates were probably Parisian, or at least French, may account for the selection of this system. If the one chosen is to be generally adopted, it is to be hoped that some provisions are to be made for the possibility of its early modification, provided that its apparent defects above noticed are not merely apparent ones. While an international system is a desideratum, it would be well if in our own country a more uniform system could be adopted by the different state and local authorities in making out the reports on which are based our mortality statistics. A uniform system of reports based on the best now used would be much more valuable in every way than the present unscientific lists that are sent out by many health boards. This is a subject worthy of consideration on the part of health officers, and others interested in health statistics.

Medical News.

ALABAMA.

DR. IRWIN W. PATTON, of Huntsville, has been appointed acting assistant-surgeon in the army, and directed to report for duty to the commanding officer of the United States forces in China.

ARIZONA.

DR. G. W. GREENLEAF, of San Diego, Cal., has been appointed physician of the Fort Young Indian School, Yuma, vice Dr. William T. Hefferman, resigned.

THE SANATORIUM at St. Mary's Hospital, Tucson, will soon be ready for occupancy. It is a building in pavilion style, with twenty-four rooms, sanitary arrangements of the latest model, and will cost about $25,000.

CALIFORNIA.

DR. WILLIAM H. FLINT has returned to Santa Barbara and resumed practice.

DR. FISHER R. CLARKE has returned to Stockton, after a two months' trip to Cape Nome, Alaska.

DR. BARTON DOZIER and Miss Mary D. Boynton, both of Los Angeles, were married on August 27.

SAN DIEGO had only fifteen deaths in July, "thirteen white, one black and one yellow." No contagious disease exists in the city.

DR. ALDEN M. GARDNER, medical superintendent of the Napa Asylum for the Insane, will, it is reported, soon resign and establish a private sanatorium in the Ralston mansion, at Belmont.

"HELMINTHOLOGISTS" are in trouble in Los Angeles because they have been practicing without first obtaining the required license to practice medicine in the state. "Dr." Genaro Yglesias was arraigned, and after making a strong fight, was finally convicted and fined $200 and costs.

THE HEALTH OFFICER of Jackson reports that on August 24 twelve houses were under quarantine for smallpox, with ten cases of the disease, all the patients being convalescent. Ranlett Station had one smallpox case, and neither Sutter Creek nor Rancheria Creek reported any spread of the disease.

THE BOARD OF HEALTH of San Francisco has endeavored to obtain possession of a fund of $4000 reserved for epidemics, on the ground that there is one smallpox case in the isolation hospital, but the supervisors have refused to turn over the money, claiming that it was to be used only in case of the outbreak of an epidemic.

DR. W. M. S. BEEDE, who for the last four years has been in the Orient, first as U. S. consular surgeon at Hongkong for three years, where he went through two epidemics of bubonic plague, and then as chief surgeon of the National Red Cross Hospital at Manila, has returned to Stockton and will resume practice there.

IT IS REPORTED that five hospital tents are to be put up at the Presidio to accommodate the overflow from the General Hospital there. The San Jose *Mercury*, in commenting on this report, recommends the Berkeley hills, and condemns the pres-

ent location, stating that "there is no excuse for a general hospital at the Presidio."

MENTONE, San Bernardino County, is to have a new sanatorium. Several Los Angeles physicians, including Drs. William M. Lewis, Ralph Hagan and Josiah E. Cowls, have recently inspected a large tract of land on which it is proposed to erect a sanatorium, which the promoters claim will be one of the finest in the state.

A SANATORIUM for consumptives is to be established in Strawberry Valley, San Jacinto, by the California Health Company, at a cost of $50,000 to $60,000. The plans contemplate a center pavilion with forty bed-rooms, lounging, smoking, reception and consultation rooms: this pavilion to be surrounded by small cottages. Half a mile away a small village of cottages is to be built for patients who wish to do housekeeping in a small way.

THE EMPLOYEES of the Southern Pacific Railway at Oakland have made a vigorous demand for prompt care of the injured. They claim that since the establishment of the main hospital for the company in San Francisco many injured men have been forced to wait and suffer for hours before removal to the hospital. Before the company abandoned its hospital work in Oakland, it is said, prompt ambulance service and hospital attention were rendered the sick and injured.

THE REPORT of the State Hospital for the Insane at Stockton shows that for the year ended June 30, 1900, the total number of patients under treatment was 1397. Of these, 96 were discharged as recovered, 35 as improved, 11 as unimproved, and 2 as not insane. The deaths were 154, and 9 escapes were reported. Of the 319 patients admitted during the year, 173 were native-born, and 30 of these were Californians. The causes for the insanity are given as follows: Intemperance, 23; religion, 6; morphinism, 4; "living alone and drinking unfermented wine, 1; "fear and excitement during initiation to a lodge," 1; "association with fortune-tellers," 1; "worry and wanting to get married," 1.

COLORADO.

DR. CAREY K. FLEMING, of Denver, secretary of the State Board of Medical Examiners, was elected president of the Rocky Mountain Interstate Medical Association, at its recent meeting at Butte, Mont.

THREE THOUSAND school children in Denver have been vaccinated during the last weeks preceding the opening of the schools. Extra precautions in this regard are being taken by Dr. Thomas J. Carlin, health commissioner, on account of the prevalence of smallpox throughout the country.

THE STATE BOARD OF HEALTH, in its latest circular, defends itself against the charges that it is persecuting consumptives and trying to run them out of the state, and quarantine against consumption. It disavows these charges and claims that its endeavors are solely to aid consumptives, as well as others. To this end it has promulgated rules for the education and guidance of consumptives.

CONNECTICUT.

DR. DEAN FOSTER, who was removed from the house staff of the New Haven Hospital for an infraction of discipline, which was apparently justifiable, has profited by his misfortune. He has been appointed resident surgeon at St. Vincent Hospital, New York City.

THE REGULAR PRACTITIONERS of New Britain, indignant at being unrecognized by the corporators of the hospital at that place, treated with contempt by the directors, ignored by the executive committee, and snubbed by the matron, called a meeting, presided over by Dr. Samuel W. Irving, at which the following resolutions were passed: Resolved, that the members of the regular medical profession are entitled to at least one-third representation on the board of directors of the New Britain General Hospital, and that one of those aforementioned representatives should be a member of the executive committee of said institution; resolved, that the regular medical profession of New Britain nominate from its members a medical and surgical staff, and that said staff should have control of all things pertaining to medical and surgical matters.

DISTRICT OF COLUMBIA.

THE GEORGETOWN HOSPITAL was the beneficiary of a lawn-fête, held on the campus of Georgetown University, September 4, 5, 6 and 7.

THE TWO REPRESENTATIVES of the medical department of the army, at the meeting of the American Public Health Association, at Indianapolis, October 1 to 5, are Major Charles Richard and Major William O. Owen.

THE COMMISSIONERS are meeting with difficulties in their efforts to secure a site for the new municipal hospital. They found a wide divergence between the prices asked for land and the ordinary valuation of the same property. This may act as a boomerang, as property-owners may be asked the reason for low assessments and tax payments on land which, under the present circumstances, they hold at so high a figure. Meanwhile matters regarding the hospital are at a standstill.

THE DISTRICT health report for the week ended August 30 showed a decided improvement over that of the previous week. Deaths amounting to 106 occurred in the week, making an annual death-rate of 13.71, as compared with 21.88 per 1000 for the week ended August 23. Typhoid fever caused 4 deaths, and 1 death occurred from whooping-cough. There were held in quarantine 33 cases of scarlet fever and 25 cases of diphtheria, an increase over the figures of the preceding week.

FLORIDA.

DR. S. H. WOODS, a graduate of University Medical College, Kansas City, has settled in Fort Meade for practice.

GEORGIA.

DR. HARRY M. CLARKE, of Milledgeville, who moved to Atlanta early in the year, has returned to Milledgeville and resumed practice.

DR. JAMES F. ALEXANDER, of Atlanta, one of the oldest practitioners in the city, has retired from practice on account of the rapid failure of his health.

THE QUARANTINE STATION at Savannah has been sold to the United States Marine-Hospital Service for $20,000. Since 1898 the station has been under the charge of the marine-hospital officials, pending report of the arbitrators appointed to fix the value of the station. Health Officer Brunner says that the station is the largest and the most important yet acquired by the Marine-Hospital Service, and should add to the prestige of that branch of the government service. If the results are good, it will lead to the acquiring of other stations, and it is therefore both the interest and the duty of the Marine-Hospital Service to give Savannah the best service of which it is capable.

ILLINOIS.

DR. MERRITT S. JEWELL, of Olena, has removed to Little York.

DR. EDGAR E. KILBY has removed from Emden to Congerville, Woodford County.

DR. CHARLES L. KOCH, of Quincy, was married at Pittsburg, Pa., August 28, to Miss Susie E. Long, of that city.

DR. J. R. ALLEN, of Custer, who has been suffering from a severe attack of appendicitis, is slowly recovering.

DR. GEORGE E. BARTH, who has practiced medicine in Rock Island for a quarter of a century, will remove to St. Louis.

DR. L. D. ROCKEFELLER will locate in Kewanee and will succeed Dr. John Murchison, who has removed to a mining town near Galesburg.

THE BARN of St. Joseph's Hospital, Joliet, the north end of which was used as an isolation ward, was seriously damaged by fire on August 28.

A PARTNERSHIP has been formed by Drs. Henry Hatch and John H. Rice, of Quincy. During the absence of Dr. Hatch, who sails for Europe in a few days, Dr. Rice will attend to the practice.

ST. CLEMENT'S HOSPITAL, Red Bud, is now ready for the reception of patients. The hospital is a three-story brick structure, is heated by steam and is elaborately equipped in every department.

Chicago.

DR. WILLIAM M. HARSHA has returned from his vacation trip to Europe.

DR. ALBERT B. HALE is lying seriously ill with typhoid fever at the Baptist Hospital.

THE POST-GRADUATE MEDICAL SCHOOL has increased its capital stock from $20,000 to $40,000.

DR. JOHN A. ROBISON and wife have returned from their summer outing at Algonquin, Mich.

DR. HENRY T. BYFORD and family have returned from their summer home at Crystal Lake, Wis.

DRS. HOMER O. BATES AND LAURA C. BATES have returned from their summer outing at Thousand Islands, N. Y.

MOUNT SINAI HOSPITAL has been incorporated by Drs. Rudolph Menn, George M. Silverberg and Adolphus E. Berting.

DR. THOMAS HUGUES was married to Miss Rose Myrtel Wakely, of Milwaukee, at St. John's Cathedral, September 5.

DR. MORLEY DA COSTA BATES, son of Dr. Homer O. Bates, was married to Miss Edith Gray Brown, also of Chicago, on August 29.

BOULEVARD SANITARIUM has been incorporated with a capital stock of $2500, by Drs. Harry J. and Wellington T. Stewart and W. Clark Allen.

HARVEY MEDICAL COLLEGE officers tendered a reception to the faculty, graduates and students on September 3. The lectures for the new term commenced on September 4.

THE FIRST regular meeting of the Chicago Gynecological Society for the year 1900 will be held in the Chicago Medical Society rooms, Friday, September 21, at 8 p.m.

DRS. A. J. OCHSNER AND A. H. FERGUSON have been appointed professors of clinical surgery in the medical department of the University of Illinois—College of Physicians and Surgeons.

DR. ARCHIBALD CHURCH has been recently appointed professor of nervous and mental diseases and head of the neurological department of the Northwestern University School.

DR. GEORGE P. DREYER, associate professor of physiology at Johns Hopkins Medical School, has been elected to the chair of physiology in the College of Physicians and Surgeons, and will take up the duties of his new position October 1.

HEALTH DEPARTMENT.

THE HEALTH DEPARTMENT has been notified that it has been awarded one of the grand prizes at the Paris exposition for its exhibit of blanks, charts and other forms in use at the office of the department.

BUBONIC PLAGUE is the text of an exhortation of the commissioner of health to the city and people to keep streets, alleys, homes and public buildings scoured and clean. He does not believe that the disease will gain a foothold even in the coast cities.

CONTROLLING WORKS at the junction of the river and the Sanitary Canal are favored by the health department, which deems such works necessary. At present it requires from eight to twelve hours to shut the gates at Lockport and stop the current, and during this time the garbage and sewage is prevented from taking its natural course through the canal, and the health of Chicago is thereby endangered.

Computed on the Federal census figures of Chicago's population—1,698,575—the death-rate of the last two weeks is 13.60 per thousand per annum, as against 15.75 per thousand for the corresponding period of 1899. This latter rate is computed on 5.44 per cent. less population than that of 1900. Since the unprecedentedly hot week of August 11, the weekly number of deaths has steadily declined, so that the total mortality for August—2138—is only 66 in excess of the average August mortality—2072—of the previous five years, and is 123 lower than for August, 1896. Should the present favorable condition of the public health continue through September, the total deaths for the year will hardly exceed those for 1899, notwithstanding that the first seven months indicated a much higher total. Deaths from the impure-water diseases continue to be gratifyingly few as compared with former years, the total for the last two weeks being 218, as against 269 for the corresponding two weeks of last year. Except for an unusual number of deaths from suicide and other forms of violence there is either no noteworthy increase or an actual decrease in the deaths from the principal causes. The deaths reported for the week ended September 1 were 443, or 32 less than for the corresponding week of last year; the death-rate per thousand was 13.70 as compared with 15.40 for 1899. Of males, 251, and of females, 192, died. The deaths of children under 1 year of age were 116; between 1 and 5 years, 56, and over 60, 67. The principal causes of death were: Acute intestinal diseases, 111; consumption, 40; violence, 39; pneumonia, 23; heart diseases, 22; nervous diseases, 18; Bright's disease, 16; cancer, 15; suicide, 10; typhoid fever, 6, and sunstroke, 4. During the week 628 births were reported. The total deaths for the week ended September 8 were 444, or 52 less than for the corresponding week of 1899. The death-rate per thousand was 13.61, as compared with 16.09 for last year. By sexes the deaths included 255 males and 189 females. By ages, 122 died, under 1 year of age, 51 between 1 and 5 years, and 68 over 60 years. The chief causes of death were: Acute intestinal diseases, 94; nervous diseases, 40; consumption, 39; violence, 39; heart diseases, 38; pneumonia, 16; cancer, 14; suicide, 12; typhoid fever, 7, and sunstroke, 2. During the week 562 births were reported. In the laboratory 139 bacteriological examinations were made; 10,540 vaccine tubes distributed; 100 antitoxin treatments given, and 339 samples of milk examined, 10.62 per cent of which were below grade. At the stockyards, 66,996 pounds of meat were condemned.

INDIANA.

DR. WILLIAM B. BLACKSTONE, of Crown Point, will remove to South Bend.

A PARTNERSHIP has been formed by Drs. Samuel G. Todd and Edgar A. Doan, of Mishawaka.

THE STATE MEDICAL BOARD reports that 6115 physicians have thus far been registered in the state.

DR. W. R. AMICK, of "consumption cure" fame, died from heart failure at Columbus, August 30.

MORE THAN six hundred physicians have registered and are licensed to practice in Marion County.

IMPETIGO CONTAGIOSA is reported to be epidemic in Indianapolis, where it has commonly been mistaken for tinea sycosis.

DR. F. W. BROWN, assistant medical examiner for the Pennsylvania Volunteer Relief Association, has had his headquarters removed from Logansport to Fort Wayne.

DR. D. R. BROWER, of Chicago, delivered an address at La Fayette, September 5, before the Tippecanoe Medical Society, on "New Things in Neurology, and Diagnosis and Treatment of Locomotor Ataxia." Stereopticon views were utilized to illustrate the important points.

THE NEW BUILDINGS of the Longcliff Hospital, the Northern Indiana hospital for the insane, at Mishawaka, were formally opened on August 28, in the presence of Governor Mount, other high state officials and invited guests. Several hundred insane patients, who have been confined in the county jails and asylums of this district for lack of accommodation in the state institution, will be transferred to the new ward building.

IOWA.

DR. HAROLD BAILEY, of Charles City, has started for Europe, where he expects to spend a year in study.

DR. J. H. STANTON has disposed of his practice at Harper's Ferry and has moved to Prairie du Chien, Wis.

DR. JESSE B. BUCK, of Iconium, has purchased the practice of Dr. L. T. Goisuch and will move to Moravia.

DR. FRANK LA FORCE, of Ottumwa, is serving an interneship in the Illinois Charitable Eye and Ear Infirmary.

DR. LORENZO T. GORSUCH, of Moravia, has sold his practice on account of ill health, and will go to either Colorado Springs or Oakland, Cal.

DR. HOWARD W. SEAGER, of Des Moines, has been appointed an acting assistant-surgeon in the army. He served as hospital steward in the Philippine campaign.

THE PHYSICIANS of Mason City held a meeting on September 3 to consider the question of a city hospital, and appointed a committee to look into the matter. Two sites for the proposed

hospital have been offered gratis, and there seems to be no doubt that the funds for erecting and equipping the hospital will be quickly raised.

MUSCATINE COUNTY has been sued by Dr. F. E. Schmidt, of Muscatine, for $575, for services rendered during the recent smallpox epidemic in that city. The petitioner sets forth that during March, April and May, 1900, he was employed by the board of health to disinfect places and houses where smallpox patients had resided, or had been kept, and that his bill had been disallowed by the board of supervisors of the county.

KANSAS.

THE COLLEGE OF PHYSICIANS AND SURGEONS, Kansas City, was formally opened on September 4, at Sixth street and Ann avenue.

THE EMPLOYEES of the ice plant and packing house have contributed $50 and fitted up a room in the new hospital at Winfield.

DR. HUBBARD LINLEY, of Atchison, has been appointed to the chair of accidental and orthopedic surgery in the Central Medical College, St. Joseph, Mo.

SUIT HAS BEEN BROUGHT against a physician of Topeka for $5500. The complainant avers that his ankle was dislocated, was not properly set and that he is now a cripple.

MAINE.

DR. E. H. DOBLE, a graduate of the Baltimore University School of Medicine, has located in Presque Isle.

DR. BLANCHE MANSFIELD, of Old Town, a graduate of the Woman's Medical College of Philadelphia, will practice in Bangor.

DR. JOHN F. HILL, who was elected governor of Maine on September 10, is the second medical man to preside over the affairs of the state. In 1878 Dr. Alonzo Garcelon was elected governor, being the only democrat ever elected to that office in Maine. Governor-elect Hill was born in Eliot, in 1860, was graduated from Bowdoin Medical School in 1877, and ten years later took another course and received a diploma from Long Island College Hospital, Brooklyn. After a few years of practice he retired and became interested in various industrial enterprises in the state. He has been a member of the state legislature since 1892.

MARYLAND.

DR. JOHN H. JAMAR, of Elkton, Cecil county, has inaugurated a movement for a drinking fountain in that place for man and beast.

DR. WILLIAM J. TODD has been appointed surgeon for the Northern Central railroad, at Mt. Washington, to succeed the late Dr. Josiah S. Brown.

AT THE annual graduating exercises of the Nurses Training School, connected with the Western Maryland Hospital, at Cumberland, on September 6, three nurses were graduated.

THE EASE with which deadly poisons can be purchased in this state for suicidal or homicidal purposes has been emphasized by the recent death of a young woman from morphin. There is no law in Maryland restricting or safeguarding in any way the sale of poison. Maryland is the only state without a pharmacy law. Legislation only extends to requiring druggists to qualify and become registered. The State Board of Pharmacy is taking steps to have this amended so as to have a complete law.

Baltimore.

DR. JAMES BOSLEY, health commissioner, has gone for a two-week's vacation to the Great Lakes.

DR. HENRY M. HURD, superintendent of Johns Hopkins Hospital, will spend the month of September at Charmion, Pa. During his absence Dr. Andrew H. Whitridge will have charge of the Hospital.

DR. PIERRE G. DAUSCH has been sued by a widow for $20,000 damages. She alleges that on September 10, 1899, the doctor performed on her husband a surgical operation from the effects of which "he became sick, sore and disordered, and in consequence thereof, died on or about Sept. 14, 1899."

DR. FLORA A. BREWSTER has been indicted by the grand jury on a charge of establishing and keeping an asylum for the care of the insane at 1221 Madison avenue, without first obtaining a license from the state lunacy commission. Dr. George J. Preston, secretary of the Lunacy Commission, was the principal prosecuting witness.

SUIT has been brought against Dr. Joseph C. A. Wunder for $10,000 damages. The suer alleges in his bill that he ran a splinter of wood into his hand and went to Dr. W. for treatment; that after being treated by the latter he failed to obtain relief, but was relieved by other professional skill. He also charges that an operation done by Dr. W. caused him to lose the use of a finger. Dr. Wunder says when the case comes to court he will be able to prove that his treatment of the case was correct.

HEALTH COMMISSIONER BOSLEY will not recognize, at least for the present, the population of this city as given by the U. S. census bureau, but will continue to estimate the mortality on a figure about 32,000 in advance of the census figures. The death-rate for the week ending September 1 was 19.70—whites, 18.53, colored 26.66—per thousand. Of these cholera infantum caused 25 deaths; consumption, 30; dysentery, 11; Bright's disease, 18; heart disease, 9; typhoid fever, 7, and diphtheria, 3.

MASSACHUSETTS.

DR. JOSEPH H. BROADBENT, JR., of Roxbury, has been appointed pathologist at Roosevelt Hospital, New York City.

DR. WILLIAM A. JACKSON, JR., of Haydenville, has sold his practice and property to Dr. Victor S. Merritt, of Hartford, Conn.

DR. LIONEL A. B. STREET, of Brookline, acting assistant-surgeon, U. S. A., who is now on his way to the Philippines, has been ordered for duty with the corps of engineers.

DR. FREDERICK T. CLARK has resigned his position at the state hospital at Poughkeepsie, N. Y., and will locate in his home, Westfield.

A LARGE TRACT of land on Mount Auburn street, Cambridge has been transferred by the Cambridge Hospital to Harvard University. It will be used as the site for the new infirmary.

DR. CARL E. SLEEPER, a graduate of Dartmouth Medical School of 1900, has been appointed interne at the Burbank Hospital, Worcester, to succeed Dr. R. C. Cross, resigned.

MORTON HOSPITAL at Taunton has a thoroughly equipped operating annex. It includes a sterilizing plant and a special operating, anesthesia, recovery and accident rooms. It now asks to have two new wings built, one at either side of the main building.

VACCINATION is called "assault" in New Bedford, the question being whether a physician of the board of health has the right to vaccinate a child against the wish of its parents. Dr. J. P. St. Germain, who was engaged in house-to-house inspection and vaccination, is said to have vaccinated two children against the wish of their parents. They have applied for a warrant for the vaccinator's arrest on a charge of assault and battery.

NEW BEDFORD is now going through the experience many Western states have had, and is agitated by the question whether its epidemic disease is chicken-pox or a mild form of smallpox. Little quarantine has been maintained and there are grave apprehensions as to the real nature of the disease. The board of health is now taking active measures to stamp out the malady.

MICHIGAN.

DR. HARRY S. KISKADDEN, of Detroit, has been appointed health commissioner to succeed Dr. B. Howard Lawson, resigned.

DR. A. BRUCE HENDERSON, of Detroit, has been appointed acting assistant-surgeon in the army, and has sailed for the Orient.

THE MORTALITY of Detroit for the week ended August 18 was 113, 55 being children under 5 years of age. During the same period 56 births were reported.

DETROIT reports 4927 deaths for the year ended July 1. Of this number 460 were due to pneumonia, 159 to cholera infantum, 34 to suicide, and 2 to murder.

THE WOMAN'S HOSPITAL AND INFANTS' HOME, at Detroit, has been incorporated; this is merely a change of name from the Woman's Hospital and Foundlings' Home, and means only a reorganization.

LUDINGTON PHYSICIANS refuse to accept the appointment of health officer, because the salary has been fixed by the city council at $300. During the first half of the year there were six deaths in the city from preventable diseases.

MINNESOTA.

DR. RALPH J. SEWALL, of Two Harbors, expects to have his hospital ready for patients this month.

DR. ALEXANDER J. STONE, of St. Paul, will probably receive the democratic nomination for congress.

DR. C. JAMES BEISE, formerly of Tracy, who has been taking a post-graduate course at Johns Hopkins Hospital, Baltimore, has located at Fergus Falls.

NORWEGIANS in St. Paul have started a movement toward the establishment of a hospital for their countrymen. Dr. Eduard Boeckmann and others have organized committees to obtain funds for this purpose.

THE PUBLIC BATHS at St. Paul, established and efficiently managed by Dr. Justus Ohage, health commissioner, reflect great credit on the discernment and executive ability of that officer. Over 213,000 have bathed at Harriet Island; in the hot weather as many as 6000 to 10,000 a day have bathed there. The cost of the establishment has been less than $10,000.

DR. HENRY M. BRACKEN, secretary of the state board of health, makes the serious charge against Dr. Aretus K. Norton, health commissioner of Minneapolis, that owing to his failure to recognize smallpox, and properly quarantine, the disease has spread throughout the city and into the state. Up to July 1 there had been 377 cases of smallpox in Minneapolis and 359 at various points in the state directly traceable to Minneapolis, it is said. Cases at Janesville, Wis., and Wahpeton, N. D., had also been traced to this source.

MISSOURI.

DR. W. E. MINOR and family have returned to Kansas City from their trip abroad.

DR. JOSEPH M. HARRIS, of Sedalia, is candidate for coroner on the republican ticket.

DR. CHARLES W. FASSETT and Dr. William T. Elam, of St. Joseph, have returned from their European trip.

DR. ROBERT W. RENWICK, of St. Louis, was married to Miss Blanche G. Becker, of St. Charles, at Belleville, Ill.

THE UNIVERSITY MEDICAL COLLEGE, Kansas City, has taken out a permit to construct an addition to the college, to cost $7000.

CENTRAL MEDICAL COLLEGE, St. Joseph, has opened with an attendance of more than forty. The fall term of Ensworth Medical College will commence September 17.

DR. HERMAN L. NIETERT, superintendent of the City Hospital, St. Louis, maintains that the surgical division of the new hospital should be able to accommodate 98 acute and 237 chronic cases, and that two wards should be provided for the detention of male, and two for female criminals.

THE NEW HOSPITAL, for which $258,000 has just been appropriated, will not suffice, says President McMath, of the board of improvements, St. Louis. He claims that it will do for emergencies, but will "come far short of providing hospital accommodations that will enable the temporary city hospital to be vacated."

NEBRASKA.

DR. ANDREW CRAWFORD, of Omaha, has removed to Harrisburg.

DR. LEE VAN CAMP assumed his duties as physician of Douglas County, September 1. Dr. W. J. Redfield Ryan has been appointed to the interneship in the county hospital made vacant by Dr. Van Camp's translation.

OMAHA needs an emergency hospital, and Dr. Victor H. Coffman, health commissioner, is endeavoring to persuade the city council to erect one before the advent of winter. The necessity is the more urgent in view of the possibility of a smallpox epidemic.

NEW JERSEY.

COL. GEORGE P. OLCOTT, of East Orange, has been appointed a member of the State Board of Health, to succeed the late Dr. Gaunt.

THE MANAGERS of the Children's Seashore Home in Atlantic City are endeavoring to keep the house open until the middle of September in order to accommodate the large number now present there. They, however, report that up to this time the funds are insufficient, and an additional $1000 is asked for.

DR. R. H. PARSONS, of Mount Holly, president of the local board of health, has made a formal complaint to the New Jersey State Board of Health regarding the contaminated water furnished the city. The drinking water has been condemned by the local physicians, and an epidemic of typhoid fever is feared. Several cases have so far been reported. The present water-supply is obtained from Ranocas Creek, and it has become so low that pools had to be dammed up in order to get a sufficient supply. It is now stated that in many of these pools the water has become stagnant.

NEW YORK.

DR. JULIUS E. HAIGHT, of Matteawan, has been appointed medical interne at the State Hospital for the Insane at Utica.

THE UNADILLA VALLEY MEDICAL ASSOCIATION was entertained at dinner at New Berlin on August 14 by Dr. and Mrs. J. B. Noyes.

DR. REID GILMORE, of the Cohoes Hospital, has been appointed house physician at the Ellis Hospital, Poughkeepsie, and has assumed his new duties.

THE LIBRARY of Syracuse University College of Medicine has received a bequest of sixty bound volumes and a number of pamphlets from the professional library of the late Dr. S. G. Ellis.

THE main building of the New York State Hospital for Insane Criminals at Dannemora will be opened very soon. It is about 300 by 40 feet, two stories high, and has about 300 cells. Dr. Albert B. Lamb, of Matteawan, will be superintendent.

THE WOMEN of Syracuse University College of Medicine have organized, during the past year, Zeta Phi, the first and only women's medical fraternity in this country. They esteem it an honor that Dr. Elizabeth Blackwell has consented to become a charter member, she having been graduated from this college and the first woman to receive the degree of M.D. in America. The purpose of the fraternity is to bring the women of the medical profession into closer touch with one another.

Buffalo.

THE MEDICAL DEPARTMENT of the University of Buffalo will open its fifty-fifth regular session on September 24.

BOTH the mayor and the postmaster of Buffalo are practicing physicians. Dr. Conrad Diehl is mayor and Dr. Samuel G. Dorr is postmaster.

THE GERMAN HOSPITAL will soon be completed. It is situated in the geographical center of a very large German population, and is modern in all its arrangements.

DR. MARCEL HARTWIG, recently elected president of the Buffalo Academy of Medicine, has offered a prize of $50 for the best essay on a scientific subject, to be presented during the season of 1900-1901 by a fellow of the academy.

THE HEALTH COMMISSIONER is trying to abate the nuisance due to the wetting and consequent fermentation of more than 600,000 bushels of grain which were in the elevators recently burned. Many complaints of nausea, vomiting and diarrhea have been made by the men working in this grain, and the effects of the stench on infants and invalids are said to be most deleterious.

THE HEALTH REPORT for July shows the annual death-rate to be 15.60 per 1000. There were 31 deaths from consumption, 24 from cancer, 94 from cholera infantum, and 25 from nephritis. The total number of deaths was 458—226 male, 232 female—as compared with 486 for the same period last year. The number of deaths under 5 years was 201, and 52 were over 70 years of age.

DR. ERNEST WENDE, health commissioner, has called the attention of the councilmen to the urgent necessity of a new and commodious quarantine hospital. The present structure has outgrown its usefulness. The necessity is the more urgent in anticipation of the cosmopolitan crowd which will assemble in Buffalo during the Pan-American Exposition and the great danger resulting from a possible outbreak of contagious disease at that time.

THE NEW YORK STATE PATHOLOGICAL LABORATORY has secured the services of Mr. Clowes, of London, England, as chemist. The laboratory, which has already attained an international reputation for its original research work on the etiology of cancer, is a part of the University of Buffalo, and its present location is in the Medical College building. The director and his assistants have been very much hindered in their work by reason of the crowded quarters. Recently a bequest of $25,000 was made for the erection of a new and modern laboratory building. Enough money has already been collected by private subscription to buy a suitable site, so that a new building is assured in the very near future.

New York City.

DR. VIRGIL P. GIBNEY and wife have been visiting for several weeks with friends in various parts of Kentucky.

DR. LOUIS L. SEAMAN, late major-surgeon of the 1st U. S. Volunteer Engineers, arrived in New York September 1, after a short European trip.

ON SEPTEMBER 5, Dr. Godfrey Rogers Pisek was married to Miss Rosalie Scranton Paul, daughter of the late Dr. F. M. Paul, of Belvidere, N. J.

THE PRISON COMMISSION will formally urge the hospital commission to select Dannemora as the site for the proposed State Hospital for Consumptives.

TEN PHYSICIANS and twenty trained nurses from Bellevue Hospital started for Galveston, September 11, to assist in caring for the sufferers from the storm which devastated that city.

TWO OF the public baths, both well patronized, have been moored all the season almost directly at the mouths of sewers. There is little excuse for such gross carelessness, but it is comforting to read that immediate steps were taken to close the baths.

AT THE annual meeting, on September 6, the following were elected officers of the prison commission: President, Lispenard Stewart, New York City; vice-president, Nelson Davenport, Troy. Secretary McLaughlin was elected for a third term.

DR. JUSTIN HEROLD, an authority on legal medicine, and editor of a text-book on that subject, has brought suit against the Metropolitan Street Railway Company for $100,000, for injury to his right leg, sustained in a collision between two street cars on May 31. It is alleged that the injury was such that he will be a cripple for life.

THE ISOLATION OF CONSUMPTIVES in the hospital on Blackwell's Island, after the removal of the insane patients therefrom, is a plan which Commissioner Keller is endeavoring to carry through. This will place the present phthisis ward at Bellevue Hospital at the disposal of the authorities for other work.

A BOY, 13 years old, died a few days ago in the Harlem Hospital, of hydrophobia, according to the *Medical Record*. He was attacked while playing in the street by a dog, which bit his nose off. The first symptom of rabies appeared seventeen days later. It is stated that this is the seventeenth death from rabies reported in this city during the past five years.

CORNELL UNIVERSITY MEDICAL COLLEGE is now established in its new building in First avenue, between Twenty-seventh and Twenty-eighth streets. The building is still unfinished, but will be ready by the time for opening of term, October 2. Thus far more than twice as many students have registered as had registered in the corresponding period of 1899.

A FAMOUS surgical case was that in which, twenty years ago, Dr. Lewis A. Sayre and the late Dr. Thomas Sabine removed a tuberculous and ulcerated nose, and built up an artificial nose from the middle finger of a man's hand. At the time of the first operation most of the physicians believed that the man was dying from tuberculosis, but he survived and eventually left the hospital with his queer substitute nose. He has recently turned up again at the hospital with advanced Bright's disease, and refuses to believe that physicians of the present day are powerless to help him again cheat death.

NORTH CAROLINA.

DR. G. M. VAN POOLE, of Spencer, who was recently appointed an acting assistant-surgeon in the army, has sailed from San Francisco for Manila.

THE CLARENCE BARKER Memorial Hospital at Biltmore, which was erected by the sisters of Clarence Barker, is to have an endowment fund; it has been started by his cousin, George W. Vanderbilt. The hospital was formally opened on September 4.

A SANATORIUM for invalids of moderate means is to be established at Asheville. Several years ago Mrs. M. Franklin Mallory, of Vermont, went to Asheville, and was impressed with the advantages of the locality for consumptives and with the impossibility of any except the wealthy availing themselves of these advantages under the existing condition. She therefore started a small establishment at which those of moderate means could live at small expense. The project proved so successful that she has purchased a large tract of land, has erected some buildings and will erect others which will be ready before cold weather. She has interested many Eastern and Chicago people in her work, and has already collected more than $4000 for the equipment of the home.

OHIO.

DR. DAVID R. SCHALL, of Del Roy, has located near East Liverpool.

DR. HENRY A. FURNISS, of Galena, has opened an office at Constantia.

DR. EPHRIAM W. LOVE, of Fayetteville, lost his residence by fire on August 30.

DR. JAMES E. MURRAY, of Middletown, has sold his practice to Dr. L. S. Krauss, of West Carrollton.

THE LATE Dr. David B. Chamberlain, of Toledo, who died intestate, left an estate valued at $7200.

DR. C. F. CLARK, of Columbus, has just returned from his vacation in Canada.

DRS. EDWIN H. AND ALLEN M. CHILCOTE have sold their practice at Bloomdale to Drs. Rolla R. and John M. Adams.

DR. U. S. G. DEATON, of Thackery, has received an appointment as acting assistant-surgeon in the army and has started for the Orient.

DR. JOHN A. WILKINS, of Delta, was made surgeon-general of the Grand Army of the Republic at its recent encampment in Chicago.

DR. SAMUEL C. LINDSAY, of Salineville, has been appointed acting assistant-surgeon in the army and ordered to report at San Francisco for assignment to duty.

DRS. GEORGE C. SKINNER AND JOHN FRANCIS, of Hamilton, sailed for Europe on September 5. Dr. Mark Millikin will have charge of Dr. Skinner's practice in his absence.

DR. CLARENCE E. DRAKE, whose term as house physician at Zanesville Hospital expired on September 1, has been succeeded by Dr. Charles N. Hanna. The latter's position as physician at the Muskingum county infirmary will be assumed by the former.

AN ATTEMPT was made to assassinate Dr. J. V. Cleaver, of Akron, August 30. Six shots were fired at him, fortunately without effect. He has been very outspoken in his remarks against the rioters, and it is thought that some revengeful rioter may be responsible for the attempt.

DR. WILLIAM J. MEANS, of Columbus, considers that his reputation has been injured to the extent of $25,000 and has brought suit against the *Citizen* Publishing Company for that amount. The casus belli is that the defendant journal stated that Dr. Mean's "mania for operating" might cause the death of Ray Chalfant, operated on at the Protestant Hospital.

OREGON.

DR. D. J. MCFAUL, of Heppner, has concluded to locate at Pendleton.

DR. RUPERT J. CHIPMAN has moved from La Grande to a larger field of labor in Portland.

GOOD SAMARITAN Hospital, Portland, suffered slight loss from fire, September 5. For a time there was apparently great danger, but thanks to the discipline and resolution of the nurses and attendants, the patients were all removed to places of safety.

THE HEALTH REPORT of Portland for August makes an excellent showing. No smallpox has been discovered for three weeks, and the pest-house is empty. Six cases of typhoid fever, and these isolated, are the only cases of contagious disease in the city.

PENNSYLVANIA.

DYSENTERY in virulent form is prevalent in Yocumtown and vicinity. All measures have been instituted to prevent it from spreading, but so far without result. All the local physicians have been taxed to the utmost to give relief to the sick. The disease is said to attack both old and young alike. So far seventeen deaths have occurred.

DR. FRED A. UTLEY, of Carbondale, will locate for practice in Blossburg.

DR. HERMANUS L. BAER was married to Miss Mabel McKinley, niece of the President, at Somerset, on September 12. Dr. Baer is a graduate of the Jefferson Medical College, Philadelphia, of the class of 1900.

MEADVILLE City Hospital is to have an addition built to accommodate patients suffering from contagious and infectious diseases.

DR. THOMAS A. MILLER, assistant physician at Allegheny County Home, Carnegie, returned to Bellevue, September 1, on the expiration of his term of office.

TITUSVILLE is to have a hospital, through the generosity of David McKelvey, who donated the ground and several thousand dollars in cash. The building will cost $15,000.

SMALLPOX, which has prevailed at Erie for some time past, has assumed a more virulent type. All the schools have been ordered closed. So far, one death has been reported.

Philadelphia.

DRS. S. LOUIS ZIEGLER AND G. E. DESCHWEINITZ have returned from Europe.

DR. JOHN H. W. CHESTNUT, who died a short time ago in Alaska, left an estate of more than a quarter of a million dollars.

DURING the past week the number of persons who enjoyed the public baths was the largest in the history of the institution, there being 418,958 visitors; of this number 100,939 were men, 309,550 boys, 6421 girls and 1639 women.

THE TRIALS of those accused of violating the pure food and oleomargarin law were held in quarter sessions' court beginning September 1. The indictments for violation of the oleomargarin law numbered 18, and 53 were on trial for selling adulterated food.

THE FREE HOSPITAL for Poor Consumptives, in its second annual report, shows that during the year 124 cases were cared for, mostly at St. Agnes' St. Mary's and Rush hospitals. The receipts for the year were $9724.65, and the disbursements, $6748.34, of which $6118.54 was paid institutions for the board of patients.

THE NEW CHILDREN'S HOSPITAL of Germantown was dedicated with appropriate ceremonies on Monday, September 3. Mayor Ashbridge delivered the dedicatory address. The dispensary of this institution was opened in June, and so far has treated 800 persons. At present there is accommodation for 25 persons, but it is hoped to double the capacity at an early date. The staff of physicians includes Dr. Ammon A. Apple, Dr. Charles K. Rowe, Dr. Marmaduke F. Van Buren, Dr. S. A. Cadwallader and Dr. Alexander Frazier.

CONSIDERABLE DISCUSSION has ensued between the members of the board of health, the post-office authorities and the physicians in attendance on the child who died of diphtheria last week and whose body lay exposed in a parlor for several hours. It was first believed that the physician was to blame for not promptly reporting the case and he was censured by the board. It now develops that the physician in question gave the letter to the mail-carrier, so that it would appear he should be absolved from blame. This throws the cause for delay on the post-office authorities.

THE DAIRY AND FOOD COMMISSION of Pennsylvania have instituted suit against the firm of Burns, Metzger & Co., spice manufacturers, on the charge of adulterating cinnamon, starches and other articles. Thirteen charges will be presented at the hearing. The articles that have been subjected to chemical analysis are said to show considerable adulteration, such as cayenne pepper, 25 per cent. adulteration, with husks or mustard seed; cloves, 20 per cent. adulteration; white pepper, 7 to 8 per cent.; African cayenne pepper, 12 per cent.; plain black pepper, 17 to 20 per cent., and 12 per cent. adulteration of cinnamon. This firm has a plant valued at $100,000 and their goods are handled by many of the smaller dealers of the city. It is believed that warrants will be issued for other dealers in these products.

SOUTH DAKOTA.

DR. CARL LAASON, recently from Norway, has opened an office in Hetland.

DR. E. W. DICKENSON, of Webster, has bought the practice of Dr. John J. Fanset, of Millbank, and will succeed him.

DR. HERMAN H. HANSTEIN has succeeded Dr. Bufort D. Black as resident physician at Homestake Hospital, Lead. Dr. Hanstein has been practicing in Kenosha, Wis. Dr. Black will leave for Mexico in a few days.

TENNESSEE.

DRS. E. D. MITCHELL, L. L. MEYER AND MARCUS HAASE have been elected to vacancies on the staff of the Memphis City Hospital.

DR. WALTER F. ROCHELLE, of Jackson, has purchased the interests of his partner, Dr. John T. Warford, in the Rochelle-Warford Sanitarium, and will conduct the establishment in future.

THE SUIT for $500 against the Knoxville Traction Co., brought by Dr. Alfred S. Horsley for injuries to his wife and the destruction of his buggy, has been decided in favor of the defendant company.

AN AMENDMENT to the Memphis Board of Health ordinance was recently offered by the mayor and passed on its first reading without objection, which makes it compulsory on physicians to report to the department of health any cases of typhoid fever or tuberculosis seen by them in practice, as the law now requires in smallpox and scarlet fever. It also provides that violation of this law shall be considered a misdemeanor.

THE MEMPHIS MEDICAL SOCIETY at its last regular meeting adopted a resolution that the president of the society appoint a committee of three whose duty it shall be to correspond with other medical societies of the state with a view to securing unanimity in an effort to have an amendment to the state medical practice act adopted at the last meeting of the general assembly, rescinded at the next meeting of this body. The amendment referred to exempts graduates of the medical schools of Tennessee from examination before the State Board of Medical Examiners, to which graduates of all other schools must submit before they are granted license to practice in the state.

TEXAS.

A NEW medical practice act has been approved by the State Medical Association, which provides for three separate boards of medical examiners, from the three principal schools of medicine, no member of any of which shall be a member of the teaching force of any medical school.

THE REPORTS of the ravages of the sea and storm in Galveston are as yet only vague, but it is reported that among the buildings destroyed are the John Sealey hospital, with most of the patients killed; Orphans' Home, casualties unknown, and St. Mary's Infirmary, only eight saved. The capacity of the John Sealey Hospital was 125 beds, and that of St. Mary's Infirmary, 350 beds.

UTAH.

DR. CHAUNCY M. BENEDICT, of Salt Lake City, has been commissioned major and surgeon in the National Guard of the state.

THE REPORT of the Salt Lake City Board of Health for the week ended September 1, shows 23 births and 16 deaths. Seven cases of scarlatina, four cases of smallpox and two cases of typhoid fever were reported during the week.

VIRGINIA.

DR. HAMILTON P. HOWARD, of Alexandria, has been appointed surgeon at the Virginia Military Institute at Lexington.

DR. BENJAMIN HARRISON, of Richmond, surgeon of the state penitentiary, is seriously ill with typhoid fever in Clarke county. Dr. James P. Roy is acting as *locum tenens* during his illness.

WASHINGTON.

THE EVERETT HOSPITAL is so crowded that it is obliged to turn away patients.

DR. MILLARD G. HINKLE has removed to Seattle from Stockton, Cal.

THE CITY health officer of Everett, Dr. John R. Hathaway, claims that diphtheria is entirely stamped out. No new cases have been reported for a week, all who had the disease have recovered and quarantine has been raised.

WISCONSIN.

DR. EUGENE R. HERRING, of Manawa, has removed to Shell Lake.

DR. GILBERT E. SEAMAN has returned from the Philippines, resigned from the army, and resumed practice in Milwaukee.

DR. JOHN HUND, who has practiced medicine and conducted a German paper in Athens for several years, has moved practice and paper to Marathon City, where he has entered into partnership with Dr. P. J. Taugher.

DR. FRANK C. STUDLEY, of Milwaukee, has leased a six-acre tract of land on the upper Milwaukee river, for a sanatorium. The buildings now on the ground will be remodeled and enlarged and will be ready for use October 1.

AN OUTBREAK of typhoid fever, mild in character, is reported in the northwestern part of Milwaukee. Twenty cases have occurred, and two-thirds of these were reported in one day. The health department is endeavoring to ascertain the source of infection.

CANADA.

DR. MORRISON, a graduate of Queen's, Kingston, has been appointed house surgeon of the New York Polyclinic Hospital.

DR. HAIG, of Campbellford, has been appointed superintendent of the Kingston General Hospital, and will begin his duties on October 1.

MONTREAL is going ahead with its crematory. Arrangements have been made to accept Sir W. C. Macdonald's offer to build and endow the institution.

DR. GILLIS, medical superintendent of the Brandon Asylum for the past four years, will be removed from that office by the Macdonald government of Manitoba.

DR. LAMONT, Winnipeg, has returned to that city after finishing a trip of 2000 miles of Indian medical inspection on the Saskatchewan river and lakes Winnipeg, Manitou and Winnepegosis.

THE PROVINCE of Quebec is now practically free from smallpox. The last case was disposed of about a month ago. A few cases of scarlet fever still exist, but they are well under control.

DR. E. PROSE, late of the Manitoba Medical College, writes from Cape Town, August 1, saying that Dr. A. B. Bing, a fellow-graduate in the same contingent, had died of enteric fever at Johannesburg.

DR. A. J. DOUGLAS has been selected for the position of health officer for Winnipeg. The former inspector, Dr. Inglis, severed his connection with the department as a result of the recent smallpox controversy.

THE NEW BRUNSWICK Medical Society held its annual meeting at St. John on July 17; the following officers were elected; President, Dr. G. T. Smith, Monckton; vice-president, Dr. S. C. Murray, Albert; treasurer, Dr. G. G. Melvin, St. John; secretary, Dr. J. H. Scammell, St. John.

TO PREVENT CONSUMPTION.

The first annual meeting of the Ontario Association for the Prevention of Consumption convened in the City Hall, Toronto, on September 4, under the presidency of Dr. James Thorburn of that city. The draft constitution was submitted to the meeting and adopted. It defines the objects of the Association to be the collection and dissemination of information as to the contagious character of tuberculosis, and as to the methods and measures necessary for public protection; the education of public opinion; to encourage co-operation of governments, municipalities and philanthropic institutions to provide sanitoria. The fee for ordinary members was placed at $1. Provision was also made for the formation of branch associations on condition that they transmit to the treasurer one-fifth of the sums received as membership fees. Dr. James Thorburn was re-elected president and Dr. P. H. Bryce corresponding secretary.

CIVIC HEALTH REPORT, MONTREAL.

The annual report of the civic health department has been printed for 1899 and embraces a pamphlet of 132 pages. The total number of deaths during the year was 6871, including 692 illegitimate children and premature births, making a proportion of 24.51 per 1000 of the population. This is an increase of 3.85 per thousand of the population, including 1.86 per 1000 due to illegitimates and premature births over 1898. The total number of illegitimate births was 522. There were still remaining on Dec. 31, 1899, 4913 privy pits in Montreal as against 8891 in 1891. In the civic hospital for contagious diseases, 359 patients were treated, 217 for diphtheria, and 140 for scarlet fever and two for measles. Of the total number 151 were children under five years of age. The death-rate was 9.41 per cent. Over 1500 examinations were made in the bacteriological laboratory by Dr. J. E. Laberge, who is in charge of this department. The total appropriation for the department was $117,383 and the outlay $114,929. Dr. Nolin vaccinated 962 people, Dr. Daze 480 and Dr. Coyle 238, making a total of 1772. There were 1878 cases of contagious diseases in the city during 1899, made up as follows: Diphtheria, 678; diphtheric croup, 54; croup, 35; scarlatina, 568; typhoid fever, 260; measles, 270; varioloid, 18. Of these cases 706 were children under five years of age. The births numbered 9655. The birth-rate was 48.45 amongst French-Canadians, 20.81 amongst other Catholics and 22.29 amongst Protestants. The surplus of births over deaths was 2784.

MARINE-HOSPITAL NOTES.

LUSTIG'S SERUM.

In a report to the surgeon-general, U. S. Marine-Hospital Service, Dr. Geddings refers as follows to Lustig's serum, reference to which is occasionally made in the medical journals. Lustig's serum is for the prevention and cure of plague and is

the serum of a horse immunized by toxins of plague precipitated after a particular method. Lustig and Galeotti have demonstrated that the toxins of plague belong to the class of nucleins and they prepare it by subjecting cultures of the bacillus pestis to the action of a 0.6 per cent. solution of caustic soda or potash. In three or fours days the bacilli are entirely dissolved and the nucleins set free are precipitated as usual by acetic acid. The substance is then collected and used for the immunization of horses, it being necessary to use a weak alkali, as sodium carbonate, for their solution. The toxin thus precipitated has about the same strength as ordinary plague toxins precipitated by ammonium sulphate. An effort was made in the Hygienic Laboratory to make practical use of this method, but it was found impracticable, owing to the very small quantity of product obtained by following the method as described by Lustig. The serum of a horse immunized with this toxin would probably have about the same antitoxic or curative value as a serum prepared by the ordinary methods, neither more nor less.

WHAT WAS DONE BY CONGRESS AT ITS LAST SESSION FOR THE MARINE-HOSPITAL SERVICE.

The continued growth of the Marine-Hospital Service, and the extension of its duties to Cuba, Porto Rico and the Philippines, made it necessary for Congress to be liberal in meeting the demands of the Service as explained to it by the surgeon-general. The office force of the bureau at Washington was increased by the addition of five new clerks, making a total of twenty-two clerks distributed among the seven divisions of the office under its reorganization. All these divisions are under medical officers, excepting one, and are as follows: 1, Division of marine-hospitals; 2, division of domestic quarantine; 3, division of insular and foreign quarantine; 4, division of sanitary reports and statistics; 5, division of personnel and accounts; 6, miscellaneous division, and 7, chief clerk. The hygienic laboratory, although not a part of the surgeon-general's office proper, is located in the same building, and the director is available for conference on many matters relating to scientific determination regarding infection and disinfection. For the Marine-Hospital Service, proper, Congress appropriated $8000 for a new surgeon's residence at San Francisco, and $16,000 for completion of pavilion yards at the marine hospitals at Boston, Cleveland, Detroit, Mobile and St. Louis, and made the general fund available for repairs and improvements. For extending and improving the national quarantine stations the sum of $359,050 was appropriated, including $131,000 for the San Francisco quarantine, $125,000 for the Florida quarantine stations—made necessary by the transfer of Tortugas to the navy department for a coaling station—$30,000 for the Savannah station, $23,750 for San Diego, $8000 for the Reedy Island, Delaware River, station, and smaller sums for the other quarantine stations at Delaware Breakwater, Cape Charles, Virginia; Brunswick, Georgia; Gulf quarantine, Ship Island, Miss., and South Atlantic quarantine Blackbeard Island, Ga. For the annual running expenses of the national quarantine stations, including those in Porto Rico, the sum of $235,000 was appropriated. Laws were passed placing the whole of the quarantine service of Porto Rico and of the Hawaiian Islands under the Marine-Hospital Service and appropriating $75,000 for the maintenance of the quarantine service in Hawaii. For the fund for the prevention of the introduction or spread of cholera, yellow fever, smallpox and plague, known as the epidemic fund, $500,000 was appropriated. The Marine-Hospital Sanatorium for the treatment of tuberculous patients of the service received the sanction of Congress after the whole scheme had been laid before a committee of the Senate, by being included in one of the appropriation bills for public buildings. A bill to increase the efficiency of the National Quarantine Service, providing penalties for infraction of the national quarantine laws, etc., passed the Senate and was reported on favorably in the House of Representatives, and will doubtless pass at the next session, there being no objection to it.

PLAGUE SITUATION IN GLASGOW, SCOTLAND.

In continuation of the same subject in issue of September 8, 1900: P. A. Surgeon A. R. Thomas, of the United States Marine-Hospital Service, now in Glasgow, reports, on September 7: "No new cases for three days. Conditions good." He has been directed to classify the freight leaving Glasgow, certain articles to be passed without inspection, other articles to be inspected and passed on a certificate showing non-infected origin, a third class to be entirely passed after disinfection, and a fourth class to be entirely debarred. Asst.-Surgeon John F. Anderson, after arriving in London, was ordered to Liverpool to carry out the same instructions as were issued to Dr. Thomas with regard to passengers and freight coming from Glasgow for shipment at Liverpool. Arrangements are being made for the ship's surgeons on transatlantic lines while plague prevails in Glasgow to take the temperature of all steerage passengers and crew the day before arrival in the United States for the information of the quarantine officer at the port of arrival. The Canadian government has requested that Dr. Thomas inspect all vessels leaving Glasgow for Canadian ports, until the arrival of their own representative in Glasgow, and this request has been granted. On September 1, the surgeon-general detailed an officer to confer with the quarantine officer of New York, as to the measures he was taking or proposed to take other than those laid down in treasury regulations, New York being the most important port in the United States having commerce with Glasgow. At a subsequent conference with Health Officer Doty at the bureau in Washington, it was agreed that he would continue what he had already begun; viz.; the taking of temperatures of all the steerage passengers and crew of transatlantic liners from Glasgow and other ports whence Glasgow passengers might take passage to the United States, and setting aside for further examination all persons who show any rise in temperature, such persons being submitted to glandular examination, as well as observation for a period of time. Orders were issued to all officers of the Marine-Hospital Service on quarantine duty and requests to all state and local health officers at ports where there is passenger traffic, to put in effect the same practice. The taking of temperatures as part of the ordinary inspection of vessels arriving at quarantine is now considered a very essential feature in quarantine administration. Mild cases of almost any infectious disease can "brace up" for the ordinary quarantine inspection and pass it, but this cannot be done if the temperatures are taken. The New York quarantine has been employing this practice for some time with regard to passengers from Habana, and the surgeon-general of the Marine-Hospital Service has instructed his officers at National quarantine stations to the same effect.

Correspondence.

Dr. Jacobi's Address and "Sectionalism."

NEW YORK CITY, Sept. 10, 1900.

To the Editor:—As a reply to the criticisms on some remarks delivered by me before the Thirteenth International Medical Congress, August 6, permit me to say to Dr. J. Wilkinson Jervey[1] that nothing is further from me than to harbor or try to create any sectional feelings. I deplore to have given him any such impression. The Doctor says himself that, "It is not the actual expression to which the Doctor gave tongue that is objectionable, but the inferential and insinuating quality of his remarks addressed to those good people across the water who know us not, save as existing, and who quite naturally accept the imputations and inferences." In this fear, Mr. Editor, I am happy to say, the Doctor is mistaken, and I feel sure he will be pleased to learn, in spite of his objections to some—shall I say unguarded?—expressions of mine, and your readers will learn with satisfaction, that not only was my address applauded by the Americans present, but that, from Lannelongue and Virchow down, the whole audience felt and appreciated (and expressed their appreciation) the claims of American medicine and medical men to recognition as full equals in the co-operative struggles of our international science and art. When I had finished, and ever since, I had the im-

1 THE JOURNAL, p. 638.

pression that I had simply continued in my life-long efforts to improve the estimation in which the American profession was held in Europe—both as a trifling proof of my gratitude for the endless acts of kindness bestowed on me personally by that profession, and as a demand of testimonial justice. Sad if I should have made a grievous mistake. But allow me to say that such references as I have been able to see in the medical and the lay press of Europe, justify that belief of mine. Besides, I refer you to the concluding paragraph, and to many others, of my address, as my defense—if defense there must be after my fellowship of nearly half a century in the profession, and after forty years of teaching and of other public work.

In your editorial remarks[2] you "regret the semi-apologetic accent of some portions of the address in regard to our national standing in medicine and science. Foreigners are condescending enough at present, and we naturally prefer such an utterance as that of Osler, who saw in the future of America a scientific Mecca, rather than even an equivocal admission of real or fancied national defects, in such an address." I think you refer to his address on the importance of post-graduate study, in which he says: "To students who wish to have the best that the world offers, let me suggest that the lines of intellectual progress are veering strongly to the West, and I predict that in the twentieth century the young English physicians will find their keenest inspiration in the land of the setting sun." In my address I say, "The time is fast approaching, I hope, when your students and doctors will travel with the sun to enjoy the light of the West." That does not exactly look like a "timid presentation" of our claims. And again, "There was a period when they asked: Who reads an American book? American books are now read the world over by privileged men, and even translated. Verily, verily, the time should come speedily when they will ask: Where is the ignoramus that does not know American literature?" Such are my convictions on that point, and I have quietly tried to turn the "condescension"—so that you call it—of European public opinion in different ways these forty years.

Lately, I received many letters remonstrating with one or the other view expressed in my address. Let it be understood that I pronounce my own opinions when I am speaking publicly; that the meeting before which I appeared was international, not national or European only, and finally that I can not enter into personal correspondence, or replies, or as a daily newspaper has it, "quarrels." But I may be permitted to say —I am referring to some opinions as expressed in my address, and criticised—on behalf of those who will not or can not read the address in full; that I am still of the opinion that we should study the Pharmacopeia of the United States and the formulary of the American Pharmaceutical Association more than the price-lists of the wholesale druggists, whom we allow to do part of our thinking; that we can find better employment than in discussions with their and publishers' agents; also that our 156 medical schools should be reduced to 25 and attached to a university and furnished hospitals of their own, and our 200 or 300 medical, or alleged medical, journals to 50; that those which are founded by professional men or by the profession at large, are preferable for many reasons, to those published in the interests of a publisher, a manufacturer or of a proprietary medicine owner; also that syndicates of medical men should see to the production and consumption of medical literature. I am still of the same opinion that I expressed in my address in regard to consultations with sectarians; and I still hold the same political views that I was rebuked for in an anonymous letter. Finally, I am still of the opinion that we should participate, not as sanitarians only, in the political and municipal affairs. Let me thank you, Mr. Editor, for the courtesy you extended me in opening your journal to these lines. Very respectfully yours, A. JACOBI, M.D.

2 See p. 628.

A CIRCUS traveling through the province of Quebec, Canada, introduced the name of Dr. Sabourin, of Saint-Jean, into a song on the program. The doctor sued the company for $5000 and was awarded $500 by the local courts, the *Revue Méd.* reports.

Book Notices.

THE MEDICAL DIRECTORY OF NEW YORK, NEW JERSEY AND CONNECTICUT. Price, $2.50. New York: The New York State Medical Association (Dr. Ogden C. Ludlow, secretary, 2309 Seventh avenue). 1900.

The Directory of the physicians of New York, New Jersey and Connecticut is a good illustration of what a state society can do to benefit its members and the profession, without depending upon commercial enterprise outside of its ranks. This directory bears evidence of being gotten up with the idea of giving all the information possible, so that it may be valuable to its possessor, rather than to make it a profitable commercial enterprise. The first page of the directory, on which is commenced a Street List of Physicians of Manhattan and Bronx, indicates this. It may not be often that one desires to know what physicians live on a certain street, but sometimes this information is decidedly important. The street index is given for all the large cities and boroughs. Following the street list is a list of physicians of Manhattan and Bronx, arranged alphabetically. Besides the address, there is also given the college and year of graduation, office hours, positions held, and to what society or societies each is affiliated. The list of Brooklyn physicians is printed on a different colored paper, to facilitate easy and quick reference—a most excellent idea. Following that of Brooklyn is a list of the physicians of the boroughs of Queens and Richmond. After this comes a vast amount of information about matters medical in Greater New York, such as the department of Public charities, of corrections, etc.; the various courts of justice and the civil boards; ordinances relating to physicians, midwives, etc.; list of hospitals, dispensaries, etc.; list of the various medical societies of Greater New York, with their officers, time and place of meeting, etc., and a list of registered pharmacists. The same general information is also given regarding other large cities in the three states covered. The homeopaths and eclectic physicians are listed separately, the name and address only being given. The whole makes a book of great value, especially to the physicians of the states it includes, and too much praise can not be bestowed on the committee for the successful way in which they have accomplished their task. The amount of labor it entailed can be appreciated only by those who have attempted such work. Every physician in New York, New Jersey and Connecticut should obtain a copy of the book, not only for its intrinsic value, but to encourage such an enterprise on the part of physicians.

FRACTURES. By Carl Beck, M.D., visiting surgeon to St. Mark's Hospital; to the New York German Poliklinik, etc. With an appendix on The Practical Use of the Röntgen Rays. 178 illustrations. Price, $3.50. Philadelphia: W. B. Saunders & Co. 1900.

In the introduction to his book, the author, after giving a brief historical description of the Röntgen rays, calls attention to their great value in the management of fractures, and mentions those in which the use of the rays is especially valuable as a diagnostic measure. By their use accuracy takes the place of ignorance and doubt, and painful manipulations cease to be necessary for diagnostic purposes. In Part I, is considered the classification of fractures, and the general process of repair and treatment. In Part II, is taken up in detail the management of the special fractures. The author's method of presenting the subject is simple, practical and easy of comprehension. There is a liberal supply of illustrations to graphically assist the reader in a thorough understanding of the text. The common, and many of the rare fractures, are represented skiagraphically. Practically all of the illustrations are new.

If the author had given as a subtitle "A Plea for the More General Use of the Röntgen Rays in the Diagnosis and Treatment of Fractures" it would have better described the character of his book. The preface reads as though the book was devoted to the Röntgen rays; the introduction is on the use of the rays, and an appendix of over fifty pages is on the practical use of the Röntgen rays. The latter, by the way,

gives much valuable information in regard to the kind of battery to use, and its management. The author is evidently an enthusiastic believer in the great value of the X-rays, even in its present development. His enthusiasm convinces him that "exploratory laparotomy for suspected lithiasis will hardly be necessary any more," a conclusion which all surgeons are not yet ready to endorse. The author is not too enthusiastic, however, and his book can not but do good in extending the use of the Röntgen rays in the management of fractures.

Deaths and Obituaries.

Jacob M. DaCosta, M.D., died at his residence at Villa Nova, near Philadelphia, from heart disease, September 11, at the age of 67 years. He was born in the Island of St. Thomas, West Indies, received his literary and classical education in Germany and then began his medical studies at the Jefferson Medical College, Philadelphia, his preceptor being Professor Mütter. He was graduated in 1852, and after spending two years in the hospitals and medical schools of Paris and Vienna, he returned to Philadelphia and established himself in practice, devoting himself especially to diseases of the heart and lungs. His contributions to medical literature have been large and varied, many of his works, such as "Medical Diagnosis," being standard. He was for some time attending physician at the Episcopal Hospital and later at the Philadelphia and Pennsylvania hospitals. In 1864 he was appointed lecturer on clinical medicine at his alma mater, and eight years later was chosen to fill the chair of theory and practice of medicine in that institution. In 1895 he was made president of the Philadelphia College of Physicians. At the time of his death he was professor emeritus in Jefferson Medical College and a trustee of the University of Pennsylvania.

WILLIAM S. WARD, M.D., a graduate of the College of Physicians and Surgeons, New York, in the class of 1849, died at Newark, N. J., September 1, at the age of 79. He had practiced medicine in Newark for more than fifty years. During the Civil War he was stationed at the Ward General Hospital, Newark, and there achieved a reputation for administrative ability. He served on the staff of St. Michael's and St. Barnabas' Hospitals and was attending physician at the Protestant Foster Home for more than thirty years.

HENRY D'HUY, M.D., died at his home in Kansas City, August 28, at the age of 80 years. He was born in Hanover, studied medicine in Dresden and at the University of Leipsic. He was graduated in 1843, and came to America in the same year, locating in Newburg, N. Y. In 1856 he located in Winterset, Ia., where he practiced until the outbreak of the Civil War, through which he served, first as a private, then as acting assistant-surgeon. He moved to Kansas City in 1889.

JOSIAH S. BOWEN, M.D., died at Mt. Washington, Md., on August 29, of heart disease, aged 68 years. In 1854 he went with a party of gold seekers to California, and later studied medicine in the University of Maryland, where he graduated in the class of 1864. He located at Mt. Washington, and practiced there nearly forty years.

FRANK STEPHEN MILBURY, M.D., a graduate of the Cincinnati College of Medicine and Surgery, in the class of 1888, died in his 44th year at his home in Brooklyn, N. Y., August 29. He was born in New Brunswick, became a dentist and practiced in Nova Scotia, and afterward in Mexico. He then took an extended post-graduate course in Europe and established himself in Brooklyn. At the time of his death he was a member of the AMERICAN MEDICAL ASSOCIATION and several other societies, besides being identified with Bedford Hospital and New York Eye and Ear Infirmary.

JEREMIAH P. EGGMAN, M. D., died at Mullanphy Hospital, St. Louis, Mo., from the effects of heat exhaustion, August 25, at the age of 31 years. He was a native of St. Louis, graduated in pharmacy, then entered the medical department of Washington University and was graduated in 1892. He practiced until the outbreak of the Spanish-American war, when he went to the front with the 1st Missouri Infantry, U. S. V. At the termination of the war he resumed practice in St. Louis.

EASTON BURCHARD, M.D., a graduate of the Kentucky School of Medicine, Louisville, 1889, assistant-surgeon U. S. Army, died of dysentery on September 2 aboard the transport *Grant* at Nagasaki. He was a native of Osage County, Missouri, and was a resident practitioner of Kansas City. He received his appointment as first lieutenant and assistant-surgeon, 40th Volunteer Infantry, August 17, 1899, and in October of that year embarked with his regiment for the Philippines.

D. V. DEAN, M.D., died September 3 in the City Insane Asylum, St. Louis, at the age of 70 years. From 1876 till 1886 he was superintendent of the City Hospital. He was one of the pioneer bacteriologists of the West and served as a trustee and as professor of physiology in Beaumont Medical College. In 1896 evidences of mental disease became noticeable and in December of that year he was committed to the insane asylum.

J. TRAVIS TAYLOR, M.D., a graduate of University College of Medicine, Richmond, Va., in the class of 1896, died in that city after an operation for appendicitis, August 31, at the age of 26 years. The Richmond Academy of Medicine held a largely attended special meeting September 1 and passed resolutions of sorrow and regret over the early death of so promising a member of the fraternity.

JOSEPH E. TRAYNOR, M.D., who was graduated from the medical department of the University of Pennsylvania in 1900, and afterward passed the examination of the State Medical Examining Board of Delaware, died August 28 at Wilmington, Del., from consumption, after a long illness, at the age of 23 years.

WILLIAM O. MCDOWELL, M.D., died at Scotland Neck, N. C., August 15, at the age of 43 years. He was graduated from the University of Pennsylvania in 1876 and commenced practice in Union, but moved to Scotland Neck a few months later, and there practiced until 1895, when his health became impaired.

JOHN G. MENNIE, M.D., for many years well known as a practitioner of medicine in Toronto, Ontario, died at his father's residence in Fergus, August 24, after a long illness, from Bright's disease. He was born in 1854, and was graduated by the medical faculty, University of Toronto, in 1882.

EDWIN H. AMOSS, M.D., of St. Paul, Minn., was found by a policeman in a stupor, due to intoxicants or drugs, to the use of which he was addicted, and died in the City Hospital, August 27. He was a graduate of the University of Michigan medical department, in the class of 1884.

JOSHUA A. GORE, M.D., was found dead on a sandbar in the Missouri River at St. Joseph, Mo., September 1. It is supposed that he committed suicide. He was born in 1826, had lived in St. Joseph since 1861, and was one of the oldest practitioners in that city.

JOHN K. MCLEOD, M.D., died at his residence in Moss Point, Miss., August 29, aged 60 years. He was a graduate of the medical department of Tulane University, New Orleans, La., in 1868, and had practiced for more than thirty years in Moss Point.

HENRY B. RUPP, M.D., died at Hummelstown, Pa., August 27, at the age of 64 years. He was graduated from the department of medicine of the University of Pennsylvania in 1861, but retired from practice on account of ill-health, in 1885.

RICHARD I. DUCKETT, M.D., died suddenly of heart disease at Bakersville, Md., August 31, aged 56 years. He was graduated from the University of Maryland in 1866, and had practiced in Bakersville for twenty years.

THOMAS H. BUCK, M.D., of Leetown, W. Va., died suddenly from apoplexy, at Luray, Va., August 29, at the age of 76 years. He was a graduate of the University of Louisville medical department, in the class of 1848.

THOMAS E. EVINS, M.D., major and surgeon 49th U. S. Volunteer Infantry, died from fever in the Philippine Islands. He formerly resided in Birmingham, Ala.

Miscellany.

The Pasteur Institute of India was opened August 9 at Kasauli. Previous to that soldiers bitten by dogs were sent to Paris for treatment.

Famine in India.—There are over 6,250,000 people in receipt of relief. According to the *Lancet*, 3,500,000 are on relief works, and the remainder are receiving gratuitous relief.

Copies of The Journal Wanted.—The following numbers of THE JOURNAL are wanted to complete volumes for a member: Vol I., Nos. 1 and 16; Vol. II., No. 14; Vol. III., Nos. 4, 11, 25. Twenty-five cents each will be paid for these at the office of THE JOURNAL.

Sanatoria for Contagious Diseases Not Allowed.—A wealthy young woman, Mdlle. Noualheir, has established a refuge for incurables at Limoges. She makes periodical visits to Paris to collect inmates and brings twenty at a time, usually persons in advanced stages of consumption. The *Gaz. Méd. de Paris* states that the local authorities have found that tuberculosis has doubled in the vicinity of her refuge and have taken measures to close it and prohibit the maintenance of any sanatorium for contagious or epidemic diseases, public or private, inside the city limits.

Societies.

Coming Meetings.

American Association of Obstetricians and Gynecologists, Louisville, Ky., Sept. 18-20.

Medical Society of the State of Pennsylvania, Wilkesbarre, Sept. 18-20.

Medical Society of the Missouri Valley, Council Bluffs, Ia., Sept. 20.

American Electro-Therapeutic Association, New York City, Sept. 25-27.

American Public Health Association, Indianapolis, Ind., Oct. 22-26.

Golden Belt Medical Society, Enterprise, Kan., Oct. 4.

Idaho State Medical Society, Boise, Oct. 4-5.

Utah State Medical Society, Salt Lake City, Oct. 4-5.

Wyoming State Medical Society, Cheyenne, Oct. 9-10.

Mississippi Valley Medical Association, Asheville, N. C., Oct. 9-11.

Iowa State Association of Railway Surgeons, Des Moines, Oct. 11-12.

Vermont State Medical Society, Rutland, Oct. 11-12.

Tri-State Medical Society of Alabama, Georgia and Tennessee, Chattanooga, Tenn., Oct. 11-13.

New York State Medical Association, New York City, Oct. 16-18.

Medical Society of Virginia, Charlottesville, Oct. 23.

THE LOUISVILLE SOCIETY OF MEDICINE met at the Galt House on September 3 and elected the following officers: President, Dr. Edward Speidel; vice president, Dr. J. R. Morrison; secretary, D. W. O. Green, and treasurer, Dr. William Jenkins.

ST. JOSEPH COUNTY (Ind.) MEDICAL SOCIETY met in the office of Dr. Jacob W. Hill, South Bend, August 28, Dr. James A. Varier presiding. Cases were reported by Drs. Frank M. Sawyer, George W. Van Benschoten, Jacob W. Hill and Harry F. Mitchell.

HAMPDEN COUNTY FRENCH MEDICAL SOCIETY.—The Canadian physicians residing in the Holyoke district in Massachusetts have organized a society with the above title, to hold quarterly meetings at Springfield. H. E. Chaput, M.D., was appointed secretary.

THE PERRY COUNTY (Ind.) MEDICAL SOCIETY held its regular monthly meeting at Tell City, September 4. Papers were read by Drs. F. Anson Evans and C. M. Brucker, of Tell City, on "Consumption," and a general discussion of the subject, by the members of the society, followed.

THE MEDICAL SOCIETY OF CITY HOSPITAL (St. Louis) ALUMNI met in the Board of Education rooms September 6. Dr. Given Campbell presented patients illustrating chorea and tabes dorsalis, and Dr. Clarence Loeb exhibited pathological specimens of aneurysm and arteriosclerosis.

THE POLK COUNTY (Ia.) MEDICAL SOCIETY held a meeting in the club rooms of the Kirkwood Hotel, Des Moines, September 4. Papers were read by Dr. Charles E. Currie, of Des Moines, on "The Therapeutics of Shock," and Dr. H. A. Minassian, of Des Moines, made a clinical report on herpes zoster.

THE ONTARIO ANTICONSUMPTION LEAGUE met at the city hall, Toronto, Ontario, on September 4. The officers of the league are: Sir Oliver Mowat, honorary president; James Thorburn, M.D., president; P. H. Bryce, M.D., corresponding secretary; Rev. C. S. Evy, B.A., D.D., organizing secretary, and L. Brock, M.D., of Guelph, treasurer.

THE CONTRA COSTA COUNTY (Cal.) MEDICAL SOCIETY held a meeting at Marinez, August 22. Dr. J. S. Riley, of Port Costa, president; Dr. J. T. Breneman, of Martinez, first vice-president; Drs. George Mackenzie and Francis F. Neff, of Concord, secretary and assistant-secretary; Dr. Jerome T. Gardner, of Brentwood, and Dr. Claude R. Leach, of Walnut Creek, were present. The president read a paper and Drs. Mackenzie and Leach presented specimens.

TRI-STATE MEDICAL SOCIETY OF ALABAMA, GEORGIA AND TENNESSEE.—As the time of meeting of this society was the same as that selected by the Mississippi Valley Medical Association, the Tri-State Society has changed its date to October 11-13. A rate of one fare for the round trip will prevail at that time to the reunions of the Army of Cumberland and the Spanish-American War veterans. Tickets will go on sale Oct 8 and will be good until Oct. 13.

THE READING (Pa.) MEDICAL ASSOCIATION met in the Raser building, August 29. Dr. S. Banks Taylor read the address of the retiring president, John K. Seaman. The following officers were elected: Dr. Seymour T. Schmehl, president; Dr. John K. Seaman, first vice-president; Dr. S. Banks Taylor, second vice-president; Dr. Louis L. Thompson, secretary and curator; Dr. Oan J. Thompson, treasurer, and Dr. Abraham S. Randenbush, representative to the Reading Hospital.

THE MASON COUNTY (Ky.) MEDICAL SOCIETY met at Maysville, August 29, Dr. John A. Reed, of that city, being host. Dr. Smith read a paper on "Post-Partum Hemorrhage"; Dr. Thomas E. Pickett, of Maysville, one on "The Surgery of Placenta Previa, With Notes of Two Cases: An Effective Method of Meeting a Formidable Complication"; Dr. A. N. Ellis presented a case of traumatic iridectomy. The next meeting will be held at the office of Dr. Amos G. Browning, September 26.

THE BELMONT COUNTY (Ohio) MEDICAL SOCIETY held its regular bi-monthly meeting, August 30, at the Windsor Hotel, Bellaire. Dr. D. L. Marsh reported a case of incipient caries of the spine; Dr. Dexter W. Boone, of Bellaire, one of traumatic tetanus, with operations, and Dr. Ellis C. Cope, of Barton, one of valvular disease of the heart. Dr. J. Park West, of Bellaire, made a report of the recent meeting of the American Pediatric Society, and Dr. Alexander H. Korner, of Woodsfield, read a paper on "Eye-Strain as a Factor in Epilepsy." The meeting was followed by a clinic.

THE KANKAKEE VALLEY DISTRICT MEDICAL SOCIETY met at Hammond, Ind., September 11, under the presidency of Dr. I. B. Washburn, of Rensselaer, Ind. After the president's address, papers were read by Dr. George E. Hoffman, of Rochester, Ind., on "Internal Causation of Disease"; Dr. D. J. Loring, of Valparaiso, Ind., on "Inflammation and Its Treatment"; Dr. W. H. Thompson, of Winamac, Ind., on "Smallpox"; Dr. J. H. Hockins, of Whiting, Ind., on "Treatment of Burns," and Dr. George W. Van Benschoten, of South Bend, Ind., on "The Relation of the General Health to the Eye and Its Diseases."

AMERICAN ACADEMY OF RAILWAY SURGEONS.—The seventh annual meeting of the academy was held in the State Senate Chamber, St. Paul, Minn., September 5 and 6, under the presidency of Dr. Charles A. Wheaton, of St. Paul. Fifteen papers

were read and freely discussed. Twenty new fellows were elected. The officers for the ensuing year are: President, Dr. D. S. Fairchild, of Clinton, Ia.; first vice-president, Dr. W. L. Estes, of South Bethlehem, Pa.; second vice-president, Dr. W. J. Mayo, of Rochester, Minn.; secretary, treasurer and editor, Dr. T. B. Lacey, of Council Bluffs, Ia. Chicago was selected as the place for holding the next annual meeting, the date to be fixed by the executive board.

New York State Medical Association.

FIRST DISTRICT BRANCH.

President, Charles H. Glidden, M.D., Little Falls.

The annual meeting of this Branch Association was called to order by its president at the Butterfield House, Utica, on the afternoon of Sept. 4, 1900.

PURE MILK FOR CITIES AND VILLAGES.

DR. CHARLES H. GLIDDEN thought it would be feasible in small cities to have the milk brought to a central station, where, after having been pasteurized or sterilized, and properly bottled, it would be placed for distribution in the hands of men who had nothing whatever to do with stables. The milk should be delivered only by such persons, thus avoiding one common and serious source of contamination. All milk should be thoroughly and slowly aerated as soon as taken from the cow, and before cooling, and this process should be continued until all animal odor had been removed. It is best conducted in a cheap, well-ventilated building remote from the stables. The ceilings of the stables should be made of well-joined timber, and should be whitewashed at least twice a year. The venders of milk, in the opinion of the speaker, should not be interested at all in the dairies, the milk being bought outright.

DR. C. B. TEFFT, Utica, said that few subjects come before the physician that give so much trouble as the regulation of the dietary of the sick. He was coming to feel that milk is almost a poison to the average person. He was pretty well satisfied that a large proportion of the milk sold in Utica had some preservative in it, and he did not believe there was a gallon of milk in that city which did not give an acid reaction at the time it was delivered to the consumer. In certain sections of the country formaldehyde was very commonly employed as a preservative of the milk. There were many breweries in his section, and it was reasonable to suppose that the grain from these establishments was fed to the cows. The state law merely says that fermented articles must not be fed to cows, yet it was well known that although this grain is said to be given to the cattle before fermentation has occurred, it was commonly mixed with cornmeal and allowed to stand until bubbles of gas could be seen on the surface of the mixture at the time of feeding. This would seem, then, to be merely an evasion of the law.

DR. LEON T. LEWALD, New York City, said that more emphasis should be laid on the great importance of cleansing the udder of the cow and on having the milker's hands scrupulously clean. Clean milk, used within a few hours, was usually a safe food, there being, as a rule, only a few bacteria, and these generally harmless ones under these conditions. Just as in surgery one could succeed largely through asepsis as opposed to antisepsis, so in connection with the milk-supply it was possible to have a safe article of food if the necessary precautions to insure cleanliness were observed. At the present day one was able by the application of the tuberculin test to properly control tuberculous disease among cows.

PLAN FOR THE REORGANIZATION OF THE NEW YORK STATE MEDICAL ASSOCIATION.

DR. FREDERICK HOLME WIGGIN, of New York city, was present to explain the new scheme of reorganization of the association. He began by saying that physicians as a class had very little influence with politicians, public officials and laymen generally. This fact had been brought out with painful clearness in connection with the efforts that had been made to regulate the abuse of medical charity. Physicians had so long stood alone and been weak-kneed that patients, when pressed to pay for professional services rendered, would quickly turn and threaten suit for malpractice if the matter were pressed further. It was most unfortunate that many physicians, feeling their individual weakness, had been weak enough to make all sorts of compromise settlements in such suits, with far-reaching and disastrous results to their professional brethren. These facts show the need for better organization, and, hence, the movement to reorganize the New York State Medical Association. All must see, Dr. Wiggin said, the necessity for effective organization, there being about 120,000 regular physicians in this country. It had seemed to the committee on reorganization that it was logical to begin with the county, making that the unit, the next step being the state organization, and the third the National organization. The committee decided to start with a unit of ten, that being the basis of representation in the national body, THE AMERICAN MEDICAL ASSOCIATION. The controlling idea was "home rule," and the necessity for preventing any clique from getting control. The details of the plan were then explained, and the advantages pointed out. The members were urged to join the National organization, not only for the ordinary advantages of such membership, but because in this way one receives one of the best medical journals in the country—THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Continuing, the speaker said that there existed a very general misunderstanding regarding the position of the regular profession toward homeopathy. He would not, he said, personally belong to any association that would endeavor to hamper him in his treatment of disease. A man may hold as many dogmas and peculiar views as he chooses to believe in, and still be a member of the regular profession, provided he is willing to be called simply a "physician" and not desire to be looked on as a disciple of a certain sect, thus placing himself in antagonism with the great mass of educated physicians. There is nothing in the Code of Ethics of the AMERICAN MEDICAL ASSOCIATION which prevents consultation with homeopaths under certain reasonable restrictions—certainly nothing which would operate to the disadvantage of the patient or the interests of humanity.

At the close of this address, the following resolution was unanimously adopted:

Resolved, That the First District Branch Association does express its approval of the proposed plan of reorganization of the New York State Medical Association.

International Congress of Hygiene and Demography.

Held at Paris, August 10 and 15.

Three-fourth of the 1500 members of this congress were official delegates from boards of health and hygienic associations. Physicians were numerous and prominent, but legislators, architects, etc., were well represented. Brouardel stated in his opening address that mothers could now be comforted with the assurance that the danger of contracting "croup" is only one-half what it was five years ago, while the chances of a fatal termination have been reduced by four-fifths. He added that one of the diphtheria wards in the Paris hospitals is about to be closed on account of disuse. He referred with especial approbation to the charts exhibited at the Exposition by the United States state boards of health, which portray with remarkable clearness the progress accomplished in the last ten years in the reduction of the general mortality and of that from diseases of known origin.

Roux discussed the means of measuring the activity of serums, and Riche called attention to the constant danger of insidious lead-poisoning from the lead used in the manufacture of the tin and enamel dishes for cooking and holding foods and drinks. In the discussion of proposed health-restrictions to marriage, certain members protested against the policy of frightening of prospective bridegrooms, as marriages are already far too infrequent, especially in France.

The resolutions adopted by the congress recommend, among other measures, that professional diplomas be awarded to plumbers, that streets and back-yards be widened, that tin cans be imprinted with the date of sealing, that water-pipes be placed where least liable to freeze, that cremation be more generally adopted, that employees in industrial establishments be protected from dust, etc., as much as possible and wear masks or spectacles. Warning circulars should be conspicuously

posted pointing out the dangers of disregarding these measures. Ships trading with plague-infected ports should be supplied with antiplague serum. International prophylaxis of contagious diseases is best promoted by the presence of a physician as a sanitary official on ships. A person with a contagious disease should not be carried in an ordinary railroad car. One resolution was to the effect that as conductors of public vehicles have not the power to prevent expectoration on the floor, some other means should be devised to put an end to this promiscuous habit. The section for Industrial Hygiene adopted a set of resolutions so revolutionary in tone, that they were not even presented to the general congress, but were left as seed to germinate for the next congress, which will be held in Brussels in 1903, where the first international congress of hygiene convened fifty years before. One of these revolutionary resolutions mentioned was proposed by Pinard, and urged that salaried women should be entitled to rest during the last three months of pregnancy. He affirmed that prematurely born infants are handicapped all their life by the deficient development of their organs and tissues.

One of the most important measures adopted by the congress was that advocating a uniform international classification of the causes of deaths, to facilitate ready comparison of statistics. The classification used in the Paris municipal reports was accepted as the standard, and the *Semaine Méd.* of August 12 brings us word that all the delegates, except one, agreed to urge its adoption in their respective countries, to commence officially with the new century, January 1, 1901.

The Paris classification is as follows: Typhoid fever, M. 11, F. 15, T. 26; typhus; smallpox; measles; scarlet fever; whooping cough; diphtheria, croup; grippe; phthisis pulm.; tub. meningitis; other tuberculoses; cancerous tumors; other tumors; simple meningitis; cerebral congestion and hemorrhage; paralysis; softening of the brain; organic heart disease; acute bronchitis; chronic bronchitis; bronchopneumonia; pneumonia; other affections of respiratory apparatus; gastroenteritis, bottle fed; gastroenteritis, breast; diarrhea from 1 to 4; diarrhea over 5; puerperal fever and peritonitis; other puerperal affections; congenital debility; senility; suicides; deaths from other violence; other causes of death; unknown; still-births.

Paris was able to show the delegates over a model hygienic, altruistic, factory village, a great chocolate plant with 2000 employes. It also invited the members to sample the limpid water flowing off from the sewage farms, while decorating them with roses—the tangible expression of the solids of the sewage.

Rocky Mountain Interstate Medical Association.

Third Annual Convention, Butte, Mont., August 29-30.

President Dr. Charles K. Cole, of Helena, Mont., called the association to order at the Court House. The committee on necrology reported on the deaths of Drs. E. R. Axtel, of Denver, and Henry Chappell, of Livingston, Mont.

TUBERCULOSIS PROBLEMS.

DR. A. MANSFIELD HOLMES, of Denver, considered some problems pertaining to tuberculosis. One-seventh of the deaths are due to this disease, and, therefore, one-seventh of the population is tuberculous. He then spoke of the effect of the mountain region on the disease, exposure and remedies, and then took up the difficulties which the tuberculous patient encounters, who is unwelcome at health-resorts, hotels and boarding houses, and who finds it difficult to obtain employment on account of the nature of the disease. He urged the establishment of sanatoria.

DR. EDGAR P. HERSHEY, of Denver, recommended segregation by aggregation.

DR. ROBERT LEVY, of Denver, commended the accommodations offered by his city for consumptives, but agreed that the comforts of home were not to be ignored in these cases.

DR. LOUIS BERNHEIM, of Butte, spoke of the scarcity of tuberculosis in Montana. The smoky season in Butte should be avoided, but he considered the Montana climate as conducive to the cure of the disease as that of any other state in the union.

RENAL CALCULUS.

DR. HARRY D. NILES, of Salt Lake City, took up the diagnosis of renal calculus. The symptoms of this condition are often so masked and so similar to those of other diseases, such as vesical calculus, appendicitis, enterolithiasis, that the differentiation requires the greatest care and alertness. Stone in the kidney he considered as of relatively frequent occurrence. Early diagnosis is of more value than improved methods of operative technique.

DR. CHARLES M. CHAMBLISS, of Bozeman, Mont., endorsed the views of the essayist, had met with cases wrongly diagnosed, but stated that cases of renal calculus are infrequently met with in Bozeman.

DR. JAMES F. SPELMAN, of Anaconda, Mont., suggested that lumbago, sciatica and neuritis be added to the list of disease conditions which may make the diagnosis of renal lithiasis difficult.

DR. J. R. E. SIEVERS, of Butte, had noticed that occasional uranalyses often disclosed diseased conditions in patients who were apparently in sound health.

GASTRIC FEVER IN CHILDREN.

DR. G. T. MCCULLOUGH, of Missoula, Mont., discussed bilious fever as a disease of children. It was more prevalent, he said, in the Rocky Mountain district than in lower altitudes. He enlarged upon the etiology and symptomatology of the disease. The thermometer furnished the best means of differential diagnosis from typhoid, and the rash from scarlet fever. He then took up the treatment and urged that the patient be given plenty of water on the theory that the system craves and demands what the inflammation consumes.

DR. JOHN W. GUNN, of Butte, said that calomel was his favorite remedy in this disease. He did not approve of the use of aconite.

DR. W. FREDERICK MCCRIMMON, of Butte, suggested mild remedies for children suffering from biliousness and laid especial stress on the use of ice instead of water.

DR. LOUIS BERNHEIM, of Butte, did not think that a cold would bring on biliousness. He considered it due to a retardation of digestion, the result of ingestion of unsuitable or improperly prepared food. He favored mild remedies and mustard plasters, and did not approve of the employment of too much medicine, chloroform, morphin, etc.

DR. JAMES F. SPELMAN, of Anaconda, Mont., also considered that the essayist gave too much medicine. He favored rest of the stomach by abstinence from irritating foods and medicine.

DR. WALTER R. PIKE, of Provo City, Utah, took up the questions of temperance and perspiration and their action on the child suffering from gastric trouble. He also spoke for little medicine.

FRACTURES OF THE LOWER JAW.

DR. JAMES F. SPELMAN, of Anaconda, Mont., reported three interesting cases of compound fracture of the lower jaw in which the treatment was attended by excellent results. Other members of the association congratulated the operator on his results but criticised or discussed points in the technique of his procedures.

Papers were read also by Dr. Edgar P. Hershey, of Denver, on "Pilocarpin in the Treatment of Inebriety;" Dr. Samuel D. Hopkins, of Denver, on "Clinical Significance of Tremor," and Dr. Thomas A. Grigg, of Butte, on "The Use and Abuse of Glasses."

The following officers were then elected for the ensuing year: Dr. Carey K. Fleming, of Denver, president; Dr. Harry D. Niles, of Salt Lake City, Utah, first vice-president; Dr. Frederick F. W. McCrimmon, of Butte, Mont., second vice-president; Dr. Charles G. Plummer, of Salt Lake City, Utah, treasurer; Dr. Edgar P. Hershey, of Denver, recording secretary; Dr. Samuel D. Hopkins, corresponding secretary; board of trustees: Montana, Dr. T. J. Murray, of Butte; Colorado, Dr. A. Mansfield Holmes, of Denver; Wyoming, Dr. James Carter, of Carbon; Arizona, Dr. Charles H. Jones, of Tempe; Utah, Dr. Walter R. Pike, of Provo City; Idaho, Dr. James H. Bean, of Pocatello.

The 1901 meeting will be held in Denver the first Tuesday in September.

Therapeutics.

Insomnia.

Dr. Bradbury states that in the treatment of insomnia the great principle of therapeutics—the removal of the cause—should ever be kept in mind. The following is his classification of the causes of insomnia:

1. *Irritative Causes.*—This class includes the insomnia caused by pain and milder irritations, such as teething, indigestion, worms, eye-strain, facial adenoids, cold feet, asthma, vesical irritation.

2. *Toxic Causes.*—Alcoholism, gout, nicotism, gastric and intestinal disorders, Bright's disease, tea, coffee, drug habits, etc.

3. *Psychical Causes.*—Grief, shock, worry, mental anxiety.

4. *Causes Arising from Changes in Mode of Living.*—Late dinners, change of climate, women at the menopause, the various forms of insanity, etc.

It may be stated in this connection, as mentioned in an article in the *Therapeutic Gazette*, that the abuse of hypnotics in the treatment of insomnia is due: 1, to the carelessness of the physician in prescribing for the symptom insomnia and not seeking the cause; 2, to the reckless prescribing by druggists. It is unnecessary to state that simpler methods should be resorted to before medicinal treatment. The condition of the patient and the heart and arterial system should be ascertained before treatment is begun.

The following prescriptions represent good combinations which may be given in the different forms of insomnia, as the severity of the case may require:

℞ Hypnal 3iii 12
Syrupi simplicis, q. s. ad ..... ℥ii 64

M. Sig. One teaspoonful at bedtime, and repeat in two or three hours if sleep is not sooner produced.

Hypnal is a combination of chloral hydrate, 165.5 parts, and antipyrin, 188 parts. It is colorless, crystalline and soluble in six parts of water. The heart should be examined before its administration.

℞ Chloralamid 3iss 6
Liquoris ammonii acetatis 3iv 16
Aquæ destil., q. s. ad ..... ℥iii 96

M. Sig. One tablespoonful at bedtime in water.

Chloralamid is a product of interaction between chloral hydrate and formamid. It is colorless, crystalline, soluble in twenty parts of cold water, and is a good substitute for chloral. It is not so powerful, so depressant nor so rapid in its action. It may be prescribed in powder form, to be dissolved in cold water, as hot water decomposes it.

℞ Trionalis 3iss 6

Ft. pulveres No. vi. Sig. One powder in hot water at bedtime.

Trional differs from sulphonal in the replacing of a methyl by an ethyl group. It is colorless, crystalline, soluble in 320 parts of cold water, and freely soluble in hot water. It is more powerful than sulphonal as a hypnotic, but fully as safe. Habermann recommends that it be given in carbonated water.

Trional is of advantage over sulphonal in that it can be administered for a prolonged length of time, and does not cause the circulatory, digestive nor renal disturbances. In chronic psychic disorders it is said to act more promptly, as in insomnia from maniacal excitement or alcoholic delirium, but is not indicated in melancholia or hypochondriasis, as it increases the nervous depression.

—*Amer. Year-Book of Med.*, 1896.

℞ Sulphonal 3iss 6

Ft. pulveres No. vi. Sig. One powder in hot water three or four hours before bedtime.

Sulphonal is colorless, crystalline, tasteless, soluble in 500 parts of cold water and 15 parts of boiling water. In cases of insanity, where it is difficult to administer medicine to the patient the powder may be placed in his soup. It seems from the literature that more harm may come from sulphonal than is ordinarily supposed. It is advised not to prescribe sulphonal continuously, and to carefully examine the urine from time to time during its administration. Another objection to sulphonal is that its action may be delayed until the following day, and then produce symptoms of drowsiness lasting for several hours. Priestly's advice is that after a week's administration it should be dropped for three or four days, and by keeping this point in view it is unattended by danger, except when the kidneys are diseased. The maximum dose for men is 30 grains and for women 15 grains.

℞ Potassii bromidi 3ii 8
Liquoris potassii arsenitis 3ss 2
Aquæ cinnamomi, q. s. ad ..... ℥vi 192

M. Sig. One to two dessertspoonfuls at night in water.

Hare recommends the above combination of bromids and arsenic in females with a weak heart where chloral is contraindicated. The arsenic prevents the production of acne.

R. W. Wilcox, in the *Med. News*, April, 1900, states the following concerning the requirements of a hypnotic which approximates as closely as possible the theoretical agent: 1, it must combine one of the alcohol radicals; 2, it must be free from depressant action on the heart and vessels; 3, it must not derange assimilation; 4, it must be safe, reliable and palatable, and he regards chloretone as nearest approaching these requirements.

℞ Tablets chloretoni, āā ..... gr. iii-vi |18-36
No. xv. Sig. One every two or three hours until sleep is produced.

This preparation is a white, crystalline substance, having a camphoraceous odor. It is formed through the interaction of chloroform, acetone and alkali. It is fully soluble in water. It is a local anesthetic as well as hypnotic. Its principal action is said to be on the cortical cells of the brain and it has practically no effect on the centers in the medulla, and from the statements concerning this preparation it can be given in very large doses with no ill effects.

Dr. C. J. Douglas, of Boston, has obtained good hypnotic results from the following:

℞ Tablets apomorphiæ hydrochloratis, āā gr. 1/30 |002
Sig. To be given hypodermically at bedtime.

INSOMNIA FROM FUNCTIONAL NERVOUS DISTURBANCES.

℞ Tinct. lupuli 3i 4
Sodii bromidi ..... gr. xv 1
Aquæ chloroformi, q. s. ad ..... ℥iss 48

M. Ft. haustus. Sig. At one dose, to be taken at bedtime.

℞ Paraldehydi 3iiss 10
Syrupi aurantii 3iv 16
Spiritus vini rect. ..... ℥iss 48
Aquæ destil. ..... ℥ii 64
Syrupi simplicis, q. s. ad ..... ℥v 160

M. Sig. One tablespoonful at bedtime.

Paraldehyde is obtained by the action of sulphuric acid on aldehyde. It is a clear fluid, with a disagreeable taste. It is said that it will not depress the heart, but is apt to disturb the stomach. It should be administered as above, or with equal parts of oil of sweet almonds.

NIGHT TERRORS.

℞ Potassii bromidi 3ii 8
Tinct. hyoscyami 3i 4
Syrupi simplicis, q. s. ad ..... ℥iii 96

M. Sig. One teaspoonful at night in water to a child of 4 to 6 years of age. —*Dominion Med. Monthly.*

The bromids increase the hypnotic effect of the hyoscyamus.

℞ Ammonii bromidi
Sodii bromidi
Vini antimonii, āā 3ss 2
Syrupi simplicis ..... ℥i 32
Aquæ menthæ pip., q. s. ad ..... ℥vi 192

M. Sig. One teaspoonful at bedtime. —Gould and Pyle.

IN MILD FORM OF INSOMNIA.

℞ Tinct. sumbul (B. P.) ..... ℥i 32
Sig. Twenty or thirty drops in water at bedtime.

℞ Ext. hyoscyami ..... gr. viii |5
Ext. conii ..... gr. xv 1

M. Ft. capsulæ No. viii. Sig. One capsule every two or three hours.

INSOMNIA DURING DENTITION.

℞. Chloralis hydratis ..... gr. viii | 5
Sodii bromidi ..... gr. xv | 1
Syrupi lactucarii
Aquæ destil., āā ..... ℥ss | 16

M. Sig. One teaspoonful every hour until quiet, for a child of 6 months or older. —Gould and Pyle.

INSOMNIA IN FIRST STAGE OF PLEURISY.

℞. Codeinæ |
Pulv. ipecacuanhæ, āā ..... gr. iii | 18
Pulv. camphoræ ..... gr. xv | 1
Quininæ sulphatis ..... gr. xii | 72

M. Ft. capsulæ No. xii. Sig. One capsule every three or four hours.

INSOMNIA OF ASTHMA.

℞. Tinct. lobeliæ ..... ℥iv | 16
Morphinæ sulphatis ..... gr. 1/3 | 02
Elixiris simplicis, q. s. ad ..... ℥ii | 64

M. Sig. One teaspoonful at night or during the attack, and repeat in two hours if necessary.

℞. Ammonii bromidi ..... ℥ii | 8
Aquæ camphoræ ..... ℥i | 32
Elixiris simplicis, q. s. ad ..... ℥ii | 64

M. Sig. One dessertspoonful at night in water. To be repeated in two hours if required.

INSOMNIA DUE TO INCOMPETENT HEART.

℞. Tinct. digitalis ..... ℥ii | 64

Sig. Five to ten drops in water every four or five hours.

IN CHRONIC BRIGHT'S DISEASE.

℞. Chloralis hydratis ..... ℥i | 4
Syrupi aurantii ..... ℥i | 32
Syrupi simplicis, q. s. ad ..... ℥ii | 64

M. Sig. Two teaspoonfuls at bedtime in water.

INSOMNIA DUE TO GASTROINTESTINAL DISTURBANCE.

℞. Sodii carbonatis ..... ℥iss | 6
Spiritus ammoniæ arom. ..... ℥v | 20
Ammonii bromidi ..... ℥iss | 6
Tinct. cardamomi comp. ..... ℥i | 32
Aquæ menthæ pip., q. s. ad ..... ℥iv | 128

M. Sig. One dessertspoonful at bedtime, and repeat in one hour if necessary.

INSOMNIA DUE TO OVERWORK OR WORRY.

℞. Olei terebinthinæ ..... gtt. xxx | 2

Sig. In capsule at one dose as a stimulant. —Bradbury.

INSOMNIA OF ALCOHOLISM.

℞. Tablets strychninæ sulphatis, āā ... gr. 1/30 | 002

Sig. One tablet hypodermically, and repeat in four hours if necessary.

℞. Tablets strychninæ sulphatis, āā ... gr. 1/30 | 002
Potassii bromidi ..... ℥iv | 16
Elixiris simplicis, q. s. ad ..... ℥iii | 128

M. Sig. One dessertspoonful at bedtime in water.
—Clouston: *N. Y. Med. Journal.*

℞. Syrupi zingiberis |
Spiritus ammoniæ arom. |
Tinct. valerianæ, āā ..... ℥ii | 64
Sat. sol. potassii bromidi, q. s. ad ... ℥viii | 256

M. Sig. One tablespoonful in water every three or four hours.

INSOMNIA OF ACUTE ALCOHOLISM.

℞. Sodii bromidi |
Chloralis hydratis, āā ..... gr. xv | 1
Tinct. hyoscyami ..... m. xv | 1

M. Sig. At one dose. Repeat in one hour if necessary.
—D. R. Brower.

℞. Chloralamid ..... gr. xv | 1
Hyoscinæ hydrobromatis ..... gr. 1/100 | 0006

M. Sig. At one dose. —D. R. Brower.

INSOMNIA OF ACUTE ALCOHOLIC PNEUMONIA.

℞. Codeinæ ..... gr. ii | 12
Elixiris chloralamid (gr. xx to ℥i) ..... ℥ii | 64

M. Sig. One tablespoonful, to be repeated in two hours if necessary. —A. A. Smith: *N. Y. Polyclinic.*

INSOMNIA OF DELIRIUM TREMENS.

℞. Chloralis hydratis ..... ℥iv | 16
Tinct. capsici ..... ℥i | 32
Aquæ menthæ pip. ..... ℥v | 160

M. Sig. One tablespoonful every two or three hours until sleep is produced. —Gould.

INSOMNIA OF CONVALESCENCE FROM ACUTE DISEASE.

℞. Somnal ..... ℥iv | 16
Elixiris simplicis, q. s. ad ..... ℥ii | 64

M. Sig. One teaspoonful in water at bedtime; repeated in three hours if necessary to produce sleep.

Somnal is a compound of chloral, alcohol and urethane.

Khmelewsky, in the "Year-Book of Medicine," states that in melancholia and simple insomnia, somnal acts better than any other hypnotic; that it is not accompanied by any disagreeable subjective symptoms on awakening; that it does not seem to affect the heart. The principal non-indication is in producing gastrointestinal disorders.

INSOMNIA OF MELANCHOLIA.

Dr. Weatherly, in the *Bristol Med.-Chir. Jour.*, advises the following prescription:

℞. Phenacetini ..... gr. x | 66

Sig. At one dose and repeat in an hour if necessary.

℞. Morphinæ sulphatis ..... gr. 1/12 | 005

Sig. At one dose and repeat once or twice during the day if necessary.

℞. Tablets hyoscinæ hydrobromatis,
āā ..... gr. 1/150 | 0004

Sig. At one dose hypodermically.

Hyoscine is indicated especially in agitative form of melancholia. The presence of heart lesions would contraindicate its use.

INSOMNIA OF HYPOCHONDRIA.

℞. Urethane ..... ℥iv | 16
Elixiris simplicis, q. s. ad ..... ℥iv | 128

M. Sig. One dessertspoonful in water at bedtime.

Urethane is obtained by heating a salt of urea with ethyl alcohol. It is soluble in water or alcohol; is colorless; has a saltpetre taste, and is crystalline. It is said to have no unpleasant after-effects, and can be given in insomnia due to mitral insufficiency.

INSOMNIA OF HYSTERIA.

℞. Potassii bromidi ..... ℥iv | 16
Chloralis hydratis ..... ℥iii | 12
Tinct. asafœtidæ ..... ℥iv | 16
Syrupi simplicis ..... ℥vi | 24
Aquæ destil., q. s. ad ..... ℥vi | 192

M. Sig. One tablespoonful every three hours until sleep is produced. —Potter.

INSOMNIA DURING CLIMACTERIC.

℞. Ammonii bromidi ..... ℥iii | 12
Tinct. humuli ..... ℥vi | 24
Aquæ camphoræ q. s. ad ..... ℥iii | 96

M. Sig. One dessertspoonful in water at bedtime.

Bradbury recommends the above combination. He states that it is of use in relieving the insomnia as well as the mental depression and flushing heats so common at this period.

INSOMNIA OF NEURASTHENIA.

℞. Chloralamid |
Tinct. zingiberis, āā ..... ℥iv | 16
Aquæ menthæ pip., q. s. ad ..... ℥iv | 128

M. Sig. One tablespoonful at bedtime in water.
—*Presse Médicale.*

Dr. Arthur Schüller (*N. Y. Med. Journal*, June 30, 1900) recommends the following for the insomnia in neurasthenia, hysteria and alcoholism:

℞. Hedonal ..... ℥v | 20
Tinct. cinnamomi ..... ℥i | 4
Elixiris aromatici, q. s. ad ..... ℥iii | 96

M. Sig. One dessertspoonful at bedtime.

He states that the dose ranges from 18 to 22 grains, and advises it given in the above form on account of the disagreeable taste.

℞ Lupulini
Pulv. camphoræ
Ext. hyoscyami, āā.....gr. iii 18

M. Ft. capsulæ No. ii. Sig. One at bedtime, and repeat in an hour or two if necessary. —Steward.

NERVOUS INSOMNIA.

Render a tumblerful of sour curds and wney alkaline with sodium bicarbonate; sweeten and grate nutmeg on top; serve hot. —*Med. Record.*

INSOMNIA DUE TO FUNCTIONAL DISORDERS.

Dr. J. W. Courtney's article on the treatment of insomnia due to functional disorders, in *Personal Hygiene*, contains the following suggestions:

1. Mental work should be performed during the first part of the day and be limited to four or six hours.

2. The bed-chamber should be cool, the bed hard and the covers light.

3. Care should be taken that the feet do not get cold, since the sensory stimuli prevent sleep.

4. A glass of warm milk or a cup of bouillon or even a glass of beer or a small quantity of food. (Avoid any large amount of alcohol.)

5. Counterirritation by application of bottles of warm water to the feet and back, and warm compresses over abdomen.

6. Very gentle massage to the back of the head and neck or gentle rubbing to the whole body, beginning with the lower extremities and working up; but this should not be done after 6 p. m., and never longer than five or six minutes at a time.

Medicolegal.

Constitutionality of Licensing Lying-in Asylums.—Section 288 of the New York penal code provides that a person who, "not being a superintendent of the poor or a superintendent of alms-houses, or an institution duly incorporated for the purpose, without having first obtained the license in writing so to do from the board of health of the city or town wherein such females or children are received, boarded or kept, erects, conducts, establishes or maintains any maternity hospital, lying-in asylum, where females may be received, cared for or treated during pregnancy, or during or after delivery," is guilty of a misdemeanor. This was averred to be unconstitutional, in the case of People vs. Hagan. But it is upheld by the first appellate division of the Supreme Court of New York. The latter says nothing in this section would prevent a person from properly caring for another boarding or living with her during pregnancy. It is the maintenance of an institution or lying-in asylum which is conducted or maintained for that purpose that is prohibited. Undoubtedly, to justify a conviction under this section, the court continues, it would be necessary to prove that the person charged had either erected, conducted, or maintained such an institution—an institution which has for its object the care of persons who are pregnant, or during or after their delivery. The requirement of a license for such an institution is to enable the public authorities to make proper sanitary regulations as to such institutions, so that inmates should not be exposed to infection, or the dangers that arise from improper uses. So, while no attempt is made to regulate the confinement of persons wherever they happen to be living, but the legislature has deemed it proper to regulate institutions or hospitals established or maintained for the treatment of such persons, the court thinks that such a regulation comes clearly within the power of the legislature. There can be no doubt, it says, that an institution in an unsanitary condition, receiving persons to be cared for during or after delivery, and in charge of incompetent persons, might cause great injury to those who become inmates thereof; and, therefore, a provision that, before a person can maintain such an institution, he must, by procuring a license from the health authorities, satisfy them that the arrangements are such that inmates will receive proper care and attention, the court holds, is within the power of the legislature.

Contract Not to Practice in Place for Ten Years.—A practicing physician, located in a town in Texas, sold to another his homestead. His wife joined in the deed in the usual manner. But, besides the usual provisions, the deed contained one stating that he, the selling physician, agreed not to locate in that town, or within a radius of ten miles of the town, to practice medicine, for the space of ten years from the date of the deed, his intention being thereby to convey his good will as well as his property. Thereafter, the purchaser brought suit on this contract, and recovered a judgment of $10 damages, and obtained an injunction restraining the seller from locating or establishing an office in the town referred to, or within a radius of 10 miles thereof, to practice medicine and surgery within such town or a radius of 10 miles thereof, unless he should be sent for outside of such radius, or from a point outside of such radius, and from interfering with the complainant's practice of medicine by establishing or locating an office for the purpose of practicing medicine and receiving calls from patients within a radius of 10 miles from said town, until the expiration of said 10 years. And the Court of Civil Appeals of Texas affirms the judgment of the court below. It points out that the restriction was limited as to area and as to time, and that it did not, as to such area, totally exclude the defendant from practice, the effect of the contract being to restrain, or within 10 miles therefrom, for 10 years. It is clear, from the authorities, the court thinks, that the agreement was not void at common law. Nor does it consider it invalid under the Texas statute against combinations in restraint or trade or preventing competition. It explains, case of Wolff vs. Hirschfield, that a transaction of this character is not rendered invalid, by the statute, for the reason that it is not a combination of persons, and because it is a sale of "good will," which is a subject of purchase and sale; that is to say, property. That the home sold did not necessarily have any connection with the practice sold the court does not think made any material difference. It says that if, as the authorities hold, the practice of a physician is a thing of value, and as such is a proper subject for a contract of sale, a sale thereof, with such contract restrictions as are reasonably necessary to make the sale effectual, will not fall within the prohibition of the statute mentioned.

Removal of Smallpox Patients to Pest-House.—Hengehold vs. City of Covington, the Court of Appeals of Kentucky says, was an agreed case wherein it was asked to decide these questions: 1. Has a city of the second class, in Kentucky, power to pass an ordinance providing for the removal of smallpox patients to a pest-house? 2. Can such city by ordinance vest such power, to remove such persons so afflicted to a pest-house, in its health board, or in any three members thereof, or in the health officer. 3. Can such removal of persons so afflicted be made by the board of health or by the city health officer, notwithstanding the physician attending the patient shall certify in writing that the patient's life would be endangered by such removal, or that he has good and careful attention, and his removal would not be advisable as a sanitary measure? In answering these question, the court says that the preservation of the public health has always been held a proper exercise of police power. There can be no doubt that in order to prevent the spread of disease, and to provide healthful conditions for the public, boards of health and like commissions may be created, and invested with power necessary and proper for such purposes; and, in determining the validity of the acts of such boards and their officers, a liberal construction is justified, in view of the public good to be accomplished. There can be no doubt of the power of the state legislature to create state boards of health for the preservation of the general health of the state, to confer upon cities and counties authority to make regulations for the health of their communities, and even to create separate corporations, differing from the political subdivisions, with like powers within their limits. Both in England and the United States such powers have been almost uniformly delegated to boards of health of municipal corporations to enact rules for the preservation of the public health, having the force of law within the respective communities; and it would seem that, in the absence of express authority, municipalities have an implied power to enact reasonable ordinances to preserve the public health and to prevent and remove nuis-

ances. Under its general powers to guard against epidemic diseases, a board of health may control and isolate persons affected with the disease. And this power, the court goes on to say, seems to be expressly delegated to the local boards by the provision of the Kentucky statutes which empowers them to inaugurate and execute such sanitary regulations as the local board may consider expedient to prevent the outbreak and spread of epidemic diseases, and to this end may bring the infected population under prompt and proper treatment during premonitory and other stages of disease. It is certainly a reasonable regulation, the court thinks, which provides for the removal of such cases to a pest-house in good sanitary condition, provided with nurses and physicians for the treatment of patients suffering with the disease. Therefore the court is of the opinion that the local board, or a quorum thereof, has undoubtedly power to order the removal of an infected patient to the pest-house. Taking up what it denominates a narrower question, the court calls attention to its being a general rule upon this subject that laws establishing state boards, and laws establishing local boards, shall be construed together, so as to give effect to both. Applying this rule, in this case, to the general law as to the powers of local boards and the charter of cities of the second class, in Kentucky, which expressly authorizes them to establish and enforce quarantine laws and regulations to prevent the introduction and spread of contagious diseases, and to secure the general health of the inhabitants by any necessary measure, the court says that it follows that the city is authorized to make additional reasonable regulations to prevent the spread of epidemic diseases. And a regulation empowering three members of the board, or the health officer elected by the board, to order the removal of a smallpox patient, it holds, is a reasonable regulation, especially where there is provided an appeal to the board, and a requirement of action by the board itself upon a certificate by the attending physician that the removal would endanger the patient's life. In such cases, it adds, the necessity for immediate action is imperative, and it is not unreasonable to permit the health officer, or less than a quorum of the board, to order such removal, in a case where it does not appear that the removal would endanger the patient's life.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Medical Record (N. Y.), September 1.

1 *Relative Bearing of the Conjoined Tendon and the Internal Oblique Muscle Upon the Radical Cure of Inguinal Hernia. Joseph A. Blake.
2 *Significance of the Bacillus Coli Communis in Drinking Water. J. H. Linsley and B. H. Stone.
3 Pathologic Physiology or Experimental Pathology, Its Scope and Significance in Medicine. Isaac Levin.
4 *The Discovery of "Ureine," the Principal Organic Constituent of Urine and the True Cause of Uremia. William O. Moor.

New York Medical Journal, September 1.

5 *Fibroid Tumors of the Uterus Complicating Pregnancy. Lewis S. McMurtry.
6 *Atrophic Rhinitis. James E. Logan.
7 Report of a Case of Nephrectomy for Ascending Tuberculosis, with Some Remarks on Cystoscopy and Catheterization of the Ureters in Women. (To be continued.) Hiram N. Vineberg.
8 Case of Acute Glaucoma with Subhyaloid Hemorrhage Supervening Upon Uniocular Retinitis Albuminurica. David Webster and Edgar S. Thomson.
9 Treatment of Tuberculous and Purulent Joints with Large-Glass-Speculum Drainage and Pure Carbolic Acid, with a Report of Seventy Cases. (To be concluded.) A. M. Phelps.

Philadelphia Medical Journal, September 1.

10 The Master of Medicine as the Teacher of Medicine. Bayard Holmes.
11 The Teaching of Physiology. William T. Porter.
12 Teaching of Pharmacology, Materia Medica, and Therapeutics in our Medical Schools. John J. Abel.
13 The Unit System of Laboratory Construction. Charles S. Minot.
14 Methods of Teaching Gynecology. Howard A. Kelly.
15 The Method of Teaching Physiological Chemistry. R. H. Crittenden.
16 Teaching Obstetrics. J. Whitridge Williams.
17 Teaching of Pathology. J. G. Adami.
18 Methods of Teaching Hygiene. Victor C. Vaughan.
19 Teaching of Anatomy. William Keiller.
20 Practical Clinical Teaching of State Medicine. Wyatt Johnston.
21 Comparative Pathology; Its Relation to Biology and Medicine. Theobald Smith.
22 *Etiology of Tropical Dysentery. Simon Flexner.

Medical News (N. Y.), September 1.

23 *Improved Technique for the Cure of Ventral Hernia. M. M. Johnson.
24 *Differential Diagnosis of Chronic Rheumatism. James J. Walsh.
25 *Essential Conditions for Habitation to Develop and Maintain Healthful Family Existence. Rosa Engelmann.
26 *Gastroptosis, with Special Reference to a New Mechanical Support. H. W. Lincoln.
27 The Advances in Medicine. Martin M. Kittell.
28 Musical Equivalents in Epilepsy, with Report of Two Cases. L. Pierce Clark.

Boston Medical and Surgical Journal, August 30.

29 *The Surgeon in the Nineteenth Century. Frederick Treves.
30 *Results of the Operative Treatment of Cancer of the Breast. Homer Gage.
31 *The Injurious Effects of Improperly Constructed School Chairs. J. S. Stone.
32 Case of Parovarian Cyst, with Twist of the Pedicle Occurring During the Fourth Month of Pregnancy; Operation; Recovery; Normal Delivery at Term. F. B. Lund.

Cincinnati Lancet-Clinic, September 1.

33 Laryngeal Tuberculosis. John A. Thompson.
34 Tuberculosis of the Kidney. C. S. Evans.
35 Tubercular Meningitis. E. W. Mitchell.

Pediatrics (N. Y.), August 15.

36 *The Use of the Diphtheria Antitoxic Globulins of the Blood Serum Instead of the Entire Serum in Diphtheria. William H. Park.
37 A Suspension-Pressure Chair for Rotary-Lateral Curvature of the Spine. Philip Hoffman.
38 Case of Nasal Diphtheria Complicated by Bronchopneumonia. Samuel McC. Hamill.

Medical Fortnightly (St. Louis), August 25.

39 Diseases of the Lungs and Pleura. Albert Abrams.
40 The Case of John Mongolian Type. Fanny King.

Virginia Medical Semi-Monthly, August 10.

41 *The Neurologic and Medicolegal Aspects of Spinal Injuries from Railroad Accidents. Wharton Sinkler.
42 Preventive Treatment of Puerperal Fever. Stephen Harnsberger.
43 *Continued Use of the Antiseptic and Eliminative Treatment of Typhoid Fever Without Any Deaths. T. Virgil Hubbard.
44 Synopsis of Paper on the Variations in Human Gait. E. H. Bradford.
45 A Case of Traumatic Tetanus Cured with Antitoxin. Blanton A. Hillsman.
46 Report of a Case of Typhoid Fever with Perforation. W. B. French.

American Journal of Obstetrics (N. Y.), August

47 Pathology of Tubal Pregnancy. Maximilian Herzog.
48 *The Technique, Indications, and Remote Results of Suturing the Round Ligaments to the Vaginal Wall for Retroversions and Flexions of the Uterus. Hiram N. Vineberg.
49 *Retrodislocation of the Uterus. R. S. Hill.
50 *The Remote Results of Conservative Operations on the Ovaries and Tubes. W. L. Burrage.
51 Report of Two Cases of Epithelioma of the Vulva. Charles P. Noble.
52 *Hernia in Children. Edward A. Balloch.
53 Report of a Case of Superior Occipital Hydrencephalocele Successfully Operated Upon. A. Palmer Dudley.
54 Placenta Previa, with Death of Fetus Before Term, and Delivery Without Hemorrhage. U. S. Bird.

Clinical Review (Chicago), September.

55 Appendicitis—Etiology—Pathology, Clinical Course. George Dock.
56 Diagnosis of Appendicitis. Frank B. Tibbals.
57 Surgical Treatment of Appendicitis. Alexander H. Ferguson.
58 Fistulæ After Appendicitis; Their Prevention and Treatment. Rush McNair.
59 Clinical Lectures Upon the Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.
60 Modern Treatment of Fractures and Bone Lesions. Donald MacLean.

Ophthalmic Record (Chicago), August.

61 Exfoliation of the Anterior Layer of the Iris with Partial Opacity of the Lens. Edward Jackson.
62 *Ophthalmic Memoranda. G. E. de Schweinitz.
63 Modification of the Holmgren Wool Test for Color Blindness. George F. Keiper.
64 Keratitis Ulcerativa Marginalis. W. A. Martin.
65 An Adjustable Trial Box for Square Prisms. Vard H. Hulen.
66 *Venous Pulsation in the Fundus Oculi. M. F. Weymann.
67 Plano-Bifocal-Segments in Trial Rings to Facilitate Presbyopic Refraction. J. N. Rhoades.

68 Epiphora: Lachrymal Abscess: Congenital Absence of Lachrymal Punctæ; Structure of the Lachrymal Duct. L. Webster Fox.

Peoria Medical Journal, August.

69 Some Practical Observations Made at the New York Post-Graduate Medical School and Hospital.
70 Diagnosis of Smallpox. Charles B. Johnson.

Annals of Ophthalmology (St. Louis), July.

71 *Pterygia: Pathology and Treatment. M. F. Weymann.
72 *The Relation of Tenon's Capsule and the Check Ligaments to Enophthalmos—Report of a Case of Traumatic Exophthalmos. William T. Shoemaker.
73 *The Significance of Chronic Rhinitis in Relation to Ocular Affections. Edmond E. Blaauw.
74 *Removal of Foreign Bodies from the Eyeball: Based Upon a Report of Eighteen Cases. Charles Lukens.
75 Spasm of Accommodation in Glaucoma Relieved by Eserin. J. A. Lippincott.
76 A Description of the Royal London Ophthalmic Hospital. William Campbell Posey.

Obstetrics (N. Y.), August.

77 Researches with Reference to Osmotic Pressure Between Mother and Child. J. Veit.
78 Extrauterine Pregnancy. Louis Frank.
79 Puerperal Fever. George Rowland.

American Journal of Ophthalmology (St. Louis), August.

80 *Some Observations Upon Syphilitic Manifestations in the Uveal Tract—the Iris, Ciliary Body and Choroid. Paul Turner Vaughan.
81 *A Comparison of the Cycloplegic Action of Scopolamin and Atropin. W. K. Rogers.
82 *Report of a Case of Choroidal Sarcoma in a Syphilitic. M. H. Post.

Western Medical Review (Lincoln, Neb.), August 15.

83 The Medical Student of the Last Century. S. D. Tobey.
84 *The Administration of Anesthetics. E. E. Levers.
85 The Equipment of the Modern Medical College. Millard Langfeld.
86 Cerebrospinal Meningitis, with a Brief Report and Some Observations. F. R. Swigart.
87 A Clinic. F. R. Swigart.
88 Clinical Demonstration. E. Stuver.

Woman's Medical Journal (Toledo, Ohio), August.

89 *Relation of the Physician to the Public School. Katharine Miller.
90 Postpartum Hemorrhage. Alice E. Burton.
91 Relative Value of Symptoms of Acute Peritonitis. E. Stanmore Bishop.

Merck's Archives (N. Y.), August.

92 The Effect of Alcohol on the Human System. Samuel H. Johnson.
93 Marked Poisoning from Five Grains of Quinin. Franklin W. Bock.
94 Clinical Observations Regarding Ichthalbin in Intestinal Diseases. Dr. Rolly.
95 *Fireman's Cramp. Willis Cummings.

Interstate Medical Journal (St. Louis), August.

96 *State of the Spinal Cord in Congenital Absence of a Limb. J. W. Ballantyne.
97 *Some Observations on Secondary Syphilis. William Frick.
98 *Insolation. Bernard S. Simpson.
99 The Light Treatment at the London Hospital. J. H. Sequeira.
100 *A Case of Rhachischisis. T. M. Rotch.

St. Louis Courier of Medicine, August.

101 Some Medical and Other Gleanings from Old-Time Chronicles and Records. George Homan.
102 The Adaptation of the Rules of Asepsis to Private Obstetric Work. H. S. Crossen.
103 *Report of a Case of Choroidal Sarcoma in a Syphilitic. M. H. Post.
104 *Upon Drainage of the Abdominal Cavity, with Excerpts from the Literature. Norvelle Wallace Sharpe.
105 Gonorrhea and Marriage. E. C. Burnett.
106 Are Emergencies Fully Anticipated in Obstetric Practice? C. A. Dannaker.

Southern Illinois Journal of Medicine and Surgery, August.

107 Medical Jurisprudence. Ben O. Jones.
108 Sympathetic Irritation and Sympathetic Ophthalmitis. Warwick M. Cowgill.
109 "Christian Science." S. J. Rhoads.
110 The Gold Cure. H. C. Fisher.
111 Dysentery: Its Etiology and Treatment. M. H. Trovillion.
112 "The Graduate." Charles E. Tucker.

Texas Medical Journal, August.

113 *Treatment of Phthisis Pulmonalis with Watery Extract of Tubercle Bacilli. James D. Osborne.
114 *Should the Use of Antitoxin in Tuberculosis be Condemned from a Purely Scientific Point of View? Carl Von Ruck.
115 Pernicious Vomiting of Pregnancy and Its Treatment with Electricity. J. P. Oliver.
116 The Clinical Laboratory as an Adjunct to Medicine. R. L. Jones.
117 The Baby's Second Summer. E. S. Ferguson.
118 Injection Treatment of Hernia. E. E. Guinn.

American Therapy (N. Y.), July.

119 *Remarks on Stenosis of the Pylorus. Henry W. Bettman.
120 Painless Labor Under Hypnotism. Jason Parker.
121 A New Method of Anesthesia. F. C. Floeckinger.

Charlotte Medical Journal, August.

122 *Remarks on the Nature and Treatment of Corneal Ulcers. Gaillard S. Tennent.
123 *Etiology and Treatment of Laryngeal Phthisis. T. P. Cheesborough.
124 The Treatment of Infantile Anuria and Retention in Adults. W. T. Parrott.
125 Report of a Case of Double Mastoiditis—Operation—Recovery. George F. Keiper.
126 Pyosalpinx. F. R. Millard.

Medical and Surgical Monitor (Indianapolis, Ind.), August 15.

127 *Therapeutic Value of Electricity. L. T. Lowder.
128 Case of Traumatic Vesicovaginal Fistula. Frederick A. Tucker.
129 Abortion. Thomas B. Noble.
130 Treatment of Acute Dysentery. Allison Maxwell.

AMERICAN.

1.—See abstract in THE JOURNAL, xxxiv, p. 1133.

2. **Bacillus Coli Communis.**—After a consideration of all the facts available, Linsley and Stone conclude that waters in which the bacilli coli communes are found to exist for any length of time are dangerous to the public health and should be condemned.

3. **Pathologic Physiology.**—In this lengthy article Levin discusses the various physiologic pathologies of the organs and functions, showing the position of pathologic physiology or experimental pathology in medicine and its importance to students and physicians.

4. **Ureine.**—Moor has found in the urine a new organic liquid, which he considers its most characteristic component, and describes the method of its isolation by treating with nitrate of silver and then with oxalic acid. The two principal rules to be kept in view are: 1, avoid high temperature; 2, use chemicals as little as possible. The substance resembles in aspect olive-oil, is of a pale yellowish color, slightly bitter to the taste, greasy to the touch, produces spots on paper, is about as heavy as glycerin, freely miscible in all proportions of water and alcohol, barely soluble in ether, and slightly alkaline in reaction. He thinks that it belongs to the group of alcohols of the aromatic series. It begins to split into different bodies at 80 C. belonging to the class of aromatic oxi-acids, and if heated to 150 C. leaves behind it pure carbon. It has a characteristic odor, that of urine; when rubbed on the skin it produces a slight burning sensation and is probably the principal cause of the irritative effects of urine. One of its most remarkable characteristics is its ability to take up large quantities of oxygen. He finds it surpasses urea as regards quantity, the greatest amount being contained in the urine voided between 5 and 7 p.m. He gives the results of experiments on animals, showing its toxicity and claims that it is the probable cause of the ammoniacal fermentation of urine, as without its presence urea can not be decomposed into ammonia and carbon dioxid. Without it he thinks all organic matter would be converted into urea which would remain in nature without any use.

5. **Tumors and Pregnancy.**—After first noticing the dangers of these growths in case of pregnancy, the author gives the statistics of Gusserow as illustrating the fact, and mentions the diagnosis, which is generally easily made when the tumor is on the anterior surface of the uterus, but may be difficult under other conditions. He advises that the patient be allowed to go nearly to term, when possible, and a Porro-Cesarean operation then be performed. When, however, the tumor grows from the lower posterior portion and fills the lower pelvic cavity, immediate hysteromyomectomy is advisable, and he reports a case illustrating its necessity.

6. **Atrophic Rhinitis.**—The causes of atrophic rhinitis are discussed by Logan, who finds none of the theories satisfactory. The hypertrophic origin may be dismissed, the theory of suppurative rhinitis in childhood, as suggested by Bosworth, might explain atrophic changes, but there is difficulty in understanding how the excessive secretion can be kept up by the atrophic tissue. The failure of inoculation experiments

is against Lowenberg's germ theory and the vital objection to all is the failure of explanation of the immense secretion. Logan thinks the middle turbinate is more liable to atrophy than the others, since its blood-supply is more limited and its tissue less resistant. He reports three cases.

22. **Tropical Dysentery.**—Flexner first reviews the history of the studies on the bacteriology of dysentery and concludes: 1, that no bacillus species yet described as a cause has any special claim to be the chief micro-organism in the etiology: 2, it is unlikely that any bacterial species that is constantly in the intestines or environments of man, except where the disease is endemic, can be considered as a probable cause of epidemic dysentery; 3, the relation of sporadic to epidemic dysentery is so remote that it is improbable that the two diseases are produced by the same organic cause; 4, the pathogenic action of the ameba coli in many cases of tropical and some of sporadic dysentery has not been disproved by the discovery of the ameba in the normal intestines and in other diseases than dysentery. While they are commonly present and concerned in the production of lesions in subacute and chronic dysentery, they have not thus far been shown to be equally connected with the acute dysentery even in the tropics. In the former varieties, bacterial association probably has much influence upon the pathogenic powers of the ameba. He next takes up the subject of dysentery in Japan and the Philippine Islands, noticing especially the statistics of Ogata and Eldridge and the bacterial studies and findings of Shiga; the organism found by the latter investigator seems to agree with the one found by Flexner and his associates in the dysentery of the Philippine Islands. The first type is a bacillus of the average size of B. coli communis, varying somewhat in the length, but almost none in the thickness, the ends slightly rounded, easily separated, markedly motile, and Gram's stain negative. It grows on all culture-media and is pathogenic to the ordinary laboratory animals. It is abundant in the acute cases, but is hard to find as they become chronic and was not found in the ordinary amebic dysentery of Manila. The second type is less numerous in acute cases and in its properties agrees well with those of the group of the colon bacillus. Tests were made as to the agglutinating power, pathogenic action and all peculiarities of Type I. He thinks that it is more closely allied to bacillus typhosus than to B. coli communis, but it differs from the former in being less markedly motile and losing its motility more rapidly; it is also more uniform in its generation of indol. After acid production in milk it gives rise to gradually-increasing alkalinity. It is inactive to blood-serum in typhoid cases, but reacts from serum in the dysenteric cases to which bacillus typhosus does not respond. He is inclined to think that acute dysentery is caused by this bacillus, while the most frequent type of chronic tropical dysentery is more likely to be due to the ameba. The serumtherapy has been experimented with by Shiga, who found in 65 cases decided reduction of the death-rate by this means. Flexner thinks that more benefit is likely to be derived from a sort of vaccination of those that are to be exposed to the endemic or endemo-epidemic dysentery of the tropics.

23. **Ventral Hernia.**—The improved technique of Johnson is described as follows: Ventral herniæ may be considered as median and extramedian: the former following median abdominal incisions; the latter resulting mostly from operations for appendicitis. An elliptical incision is made a little within the border of the opening in the abdominal wall. This must be done carefully, as there is frequently a loop of intestine adherent to the inner surface of the hernial sac. The skin and superficial fasciæ—if they can be distinguished—are then dissected back, exposing the sheath of the rectus muscle. On the outer side a similar dissection is made an inch or more over the external oblique. The edges of the opening are trimmed and a No. 25 silver-wire suture is inserted at the upper angle of the opening by lifting the abdominal wall and passing the needle through the peritoneum, rectus muscle and skin, about one inch from the free border of the opening. The needle on the other end of the wire is similarly passed through the abdominal wall on the opposite side. Silver-wire sutures are inserted at intervals of one inch throughout the entire length of the incision. All the subcutaneous tissues are then united by a continuous kangaroo-tendon suture, and the skin is closed by a continuous suture of the same material. The deep wire sutures are now taken up one by one, moving them back and forward, to make sure that a loop of gut is not included between the wire and the abdominal wall. The ends of the wire are wound around a piece of ivory on either side and drawn sufficiently tight to relieve the tension on the kangaroo-tendon stitches. This is the old and nearly obsolete "quill suture" used for a new purpose. Half the wires are removed in ten days and the remainder in fifteen days. When the hernia is in the median line the principle is the same. The object is to relieve the tension on the stitches which hold the muscular tissues together until firm union has taken place.

24. **Chronic Rheumatism.**—Walsh recognizes four types of conditions diagnosed as chronic rheumatism: 1. Recurring subacute rheumatism. 2. Symptoms of abarticular rheumatism, which occur over and over again during unsettled weather, especially in children. 3. This group is the one that really deserves the name. It contains the cases in which the joint-lesions that have occurred during an attack of rheumatism persist and even become worse by secondary degenerative processes continuing through years, sometimes leading to marked and lasting deformity. In this case the main point is to get the history of the original rheumatism. 4. This last class is not rheumatism in its proper sense, but includes various ailments characterized by pain, including forms of toothache, flat-foot, occupation neuroses, etc.

25. **Healthy Habitations.**—Engelmann's article is a plea for the reform of the lodgings of the poor, pointing out the defects that exist and suggesting their remedies.

26. **Gastroptosis.**—The treatment of gastroptosis described by Lincoln consists in removing pressure at the waist, good nourishment, relief from constipation, exercise, massage, electricity, bromids to relieve nervousness, tonics, etc. For mechanical treatment he has devised and describes a bandage, or rather a plaster application, in place of the binder, the results of which he thinks are more gratifying. Its action is to produce upward pressure on the lower abdomen.

29.—See abstract in THE JOURNAL of August 4, p. 293.

30. **Cancer of the Breast.**—The history of the treatment of cancer of the breast is noticed by Gage, who points out that two objects are to be aimed at: prevention of local recurrences and securing of longer immunity from disease. He analyzes some of the statistics that have been published, showing that with more thorough operation the local recurrences are less likely to happen and says also that there has been a steadily increasing percentage of cases that have passed the three-year limit without recurrence of the disorder. He believes that while the results are yet not what they ought to be, they are sufficient to convince him that in the thorough and complete removal of cancerous breasts we have a means of offering longer immunity from cancerous affections to a large proportion of these patients.

31. **School Chairs.**—The improper construction of school seats and their hurtful effects are noticed by Stone, who points out that lateral spinal curvature almost always originates during school life. The great defect has been in the failure to recognize that any attitude, no matter how good in itself, can be long maintained without causing fatigue, and he mentions especially the need of proper chair-backs. There are two essentials for consideration—under no circumstances should the shoulders be forced forward, that is to say, there should be a firm support for the sacrum and lumbar region, and at the same time there should be moderate support for the dorsal region up to the shoulder-blades. In this way the liability to round shoulders would be decreased and account is taken of the fact that full extension of the spine tends to prevent lateral curvature while flexion allows it. As an illustration he notices the typewriter chair-back, which has been found to be a financial success, as it meets the physical requirements.

36. **Antitoxic Globulins of the Blood-Serum in Diphtheria.**—Park has experimented with the use of the antitoxic globulins of the blood-serum instead of the whole serum, using

it diluted so that each cubic centimeter contains the same number of units as the original serum. He finds it rather more irritating, but otherwise equally efficient so far as the diphtheria is concerned, while the globulins retain their antitoxic properties for the greater part of two months. It is easily soluble and can be put up in tablets and thus readily transported. On the whole, however, his results are somewhat disappointing, as the globulins apparently contain a great number of the deleterious elements of the blood-serum and it does not appear that we can isolate these to any advantage in this way. The practical advantage appears to be that in this substance we have a soluble, permanent and compact dried antitoxin serum which will not quickly deteriorate.

41. **Railroad Injuries.**—Sinkler describes the condition of traumatic hysteria and neurasthenia, more especially in their medicolegal aspects. While he admits that absolute simulation is perhaps a rarity, he thinks exaggeration is extremely frequent, and mistakes are made sometimes greatly to the damage of the corporation sued. Usually, and probably in the majority of cases, the patient unconsciously exaggerates his condition. He reports the case of a would-be pensioner who was exposed by etherization. In making the examination of a patient who has been in an accident, the expert would best see him alone. He should be allowed to give a full account of the injury and its symptoms, carefully observing his manner and condition, and after the removal of the clothing, examine for scars, malformations, deviations of the spine and muscular rigidity, reflexes, sensibility in particular, etc. If the case is difficult to correctly diagnose, it is well to get the patient's consent to take ether on some pretext and this usually is infallible. The physician ought never to act as assistant and prompter to counsel and should try to be as impartial as possible. In conclusion he urges every one to discourage litigation on either side, as it has a bad effect, even when the injury has occurred, by keeping up suspense and expectation. We must always remember, too, that hysteria is not a fraud and does not exclude the existence of organic disease.

43.—See abstract in THE JOURNAL, XXXIV, p. 1130.

48.—See abstract in THE JOURNAL, XXXIV, p. 1338.

49. **Uterine Dislocations.**—First stating the normal relation of the uterus and the cause of its backward displacement, Hill holds that we must first remove the etiologic factors. When adhesions exist they must be thoroughly destroyed and the abdominal is better than the vaginal route for this purpose. When the cervix is drawn forward we should direct our efforts to overcoming this condition, which is usually done by repeatedly and forcibly carrying the cervix backward, though it may take time and trouble. The use of the pessary is described, and for operative procedure for shortening of the round ligaments he prefers the Alexander method. Vaginal fixation of the uterine body is condemned and ventrofixation he considers unscientific and illogical in principle, though he recommends it in old retroversions with adhesions, long uterosacral and small, round ligaments. He does not favor operating on the uterine tissue itself by removing a plug from the opposite wall.

50. **Conservative Operations on Ovaries and Tubes.**—From a review of 85 cases, Burrage deduces the following conclusions: 1. It is advisable to do conservative operations in all cases in which the ovaries and tubes are not hopelessly diseased in all parts of their structure, except in patients who are near the menopause, on patients who have pronounced gonorrhea of long standing, and on the rare cases of malignant disease. 2. When a patient is near the menopause—over 35 years of age—and has ovarian or tubal disease of any considerable degree of severity, it is generally wiser to perform complete removal, with or without hysterectomy, according as the uterus also is diseased or not. 3. In cases of well-marked gonorrhea of long-standing, especially if the patient is constantly exposed to reinfection, if both tubes are seriously diseased and closed, total removal with or without hysterectomy is the operation of choice. 4. In certain cases of this class where the patient thoroughly understands the likelihood that another operation may be necessary at some future time, and wishes to take the chances in the hope of preserving the function of menstruation, conservative operation is permissible. 5. If one tube is patent and healthy in appearance and there is enough healthy ovarian tissue to preserve, a conservative operation ought to be performed even in the presence of gonorrhea. 6. With present methods of performing resection of the tubes, if both tubes are found closed at the time of operation, subsequent pregnancy is not to be expected. 7. In severe grades of inflammation of the appendages, irrespective of causation, if the ostium abdominale of one tube is patent, the prospect of subsequent pregnancy after the preservation of a portion of ovary is about one in four and a quarter, or 23.5 per cent. 8. In the less severe grades of inflammation, under similar conditions of tube and ovary, the prospect of subsequent pregnancy is about one in two and a quarter, or 44 per cent. 9. In women who have borne children, in both classes, subsequent pregnancy may be expected in 35 per cent., whereas in the previously sterile it may be looked for in only 5 per cent. 10. If it is necessary to remove both ovaries, it is of no advantage to preserve any portion of tubal tissue, but, except under conditions just enumerated, some ovarian tissue should be preserved in every case.

52. **Hernia in Children.**—Balloch concludes from his study of the subject that hernia is not an infrequent condition in children and of the different types, the umbilical is generally cured without operation, the femoral never, and the inguinal in from 70 to 80 per cent. of the cases. In view of the serious handicap in the battle of life caused by hernia, it is justifiable and proper to recommend operation for the radical cure in children who have faithfully worn a truss for two years without benefit. The mortality is less than would result from accident if operation was neglected.

62.—See abstract in THE JOURNAL, XXXIV, p. 689.

66. **Venous Pulsation in the Fundus Oculi.**—After two years' study of his clinical observations, Weymann makes the following report, in substance: Venous pulsation on and about the disc is very common, perhaps more frequent under ordinary physiologic conditions. It is most easily seen in physiologic excavations, and where the veins twine around the arteries or make a loop as they emerge from the crater-like center of the disc. In such places the veins look darker, owing to the doubling of the blood-column due to superimposition. The venous pulsation differs from the arterial pulse seen in hypertension of the ball. The latter is a true pulse, quick and flash-like, synchronous with distended arteries, while the former, though equally frequent, is not thus synchronous. It appears later, is slow and heaving, and easily followed in its wave. It is most prominent where the veins are largest and is lost as the caliber diminishes, hence the condition is not a true wave caused by internal distension. It is not a true pulsation, but is without doubt produced by such. The pulse expansion compresses the lumen of its accompanying vein, which action, in damming up the venous flow, becomes more accentuated by the circumstance that it travels in the direction opposite to the venous current. Whenever the two vessels are sufficiently far apart, no such effect can be produced.

71. **Pterygia.**—Weymann advises the removal of all pterygia; though they may become sometimes non-progressive, undue procrastination may have serious consequences. The methods for destruction of the head may vary, but they should all produce a thorough and smooth removal, be entirely free from danger, and cause sufficient plastic reaction to result in a firm scar opposing conjunctival traction. The best means, in his opinion, is a very thin galvano-cautery knife, with the blade bent about 45 degrees to its insertion, and it should not be held any farther from the fingers than about two inches to do good work. A full-fledged pterygium excision is the only correct plan, and the following operation is described as the most radical one, in his opinion: After cocainizing and flooding the conjunctival sac, to remove the excess of alkaloid, the neck of the pterygium is grasped with an iris-forceps and gently pulled from the ball to avoid cutting healthy conjunctiva. A very narrow and sharp-pointed cataract knife is made to pierce the tissues in such a way that the neck is separated from the adjoining healthy lining without any loss of the latter. A pair of scissors is started at the incisions and caused to delimit the

growth, both below and above, nearly as far as the plica semilunaris. From this point both incisions are joined by two converging cuts meeting at, or near, the caruncle. Raising the inner end, the operator now separates the growth from the eyeball as far as the head, always tensing it as he clips adhesions, with the scissors against the pterygial body. The head is detached by a slow, see-saw motion of an ordinary cataract knife or lance and the roughness of adjacent parts worn down by the galvano-caustic spatula. After flooding the eye, inspection will show an amount of subconjunctival vascularization and it will be seen that, in bad cases, it reaches farther over the globe than did the body of the pterygium. This vascular matting should be pulled out and thoroughly excised. A tenotomy hook is now passed under the lining to be approximated in order to break up adhesions. Near the sclerocorneal junction smart traction is made to allow the unobstructed passage of the scissors for the "accommodative incisions." Four or five sutures are then passed—not thicker than No. 6—by a curved round needle, to avoid cutting and tearing the membrane. The first stitch should be as close to the corneal margin as the accommodative incisions will allow. A pair of very small curved scissors will now be made to detach the conjunctiva along the limbus corneæ, both above and below, for a distance of nearly one-fourth the total circumference. This is followed by immediate elastic retraction of the flap-angle thus freed, but owing to the fact that the stitches are already correctly placed, approximation must be perfect. The sutures should be tied first either at the center or the inner canthus. The stitches are removed on the third day. Occasionally one will be found to have cut through, but no damage is done. The operation must be thoroughly aseptic. He claims that this operation leaves the eye in a nearly normal condition without danger of relapse, that post-operative reaction is very mild, and that it is applicable to all cases except where the pterygial body is very wide and no tissue for approximation is available. In such cases transplantation is the only resource.

72. **Enophthalmos and Tenon's Capsule.**—From a study of the anatomy of the eye, Shoemaker thinks it probable that the orbital fascia is necessary to maintain the eyeball in its natural position, and if it becomes incapable of performing its function then enophthalmos may result. This may be the case in paralysis of the muscular fibers in the check ligaments or in nutritional disturbances leading to atrophy or relaxation of the same, which may be caused by traumatic rupture of the check ligaments or orbital tumors of the fascia, and would be especially liable to follow rupture of the posterior investing sheath of the eyeball. The combined and simultaneous action of the four recti muscles, which rarely occurs, producing spastic enophthalmos, would meet with a physiologic protest, but not with prohibition on the part of Tenon's capsule. The elasticity of the fascia may be reckoned upon in those cases of enophthalmos said by some to follow a combined paralysis of the two oblique muscles.

73. **The Nose in Ocular Affections.**—Blaauw calls attention to the importance of knowledge of the nose for ophthalmologists and the method in which nasal disease may affect the eye with a changed secretion, with narrowing of the lachrymal duct, nervous irritation, etc.

74.—See abstract in THE JOURNAL, xxxiv, p. 688.

80. **Syphilis of the Uveal Tract.**—In seventy cases of syphilis, Vaughan finds the uveal tract involved twenty-nine times, or in 41.4 per cent. Twenty-one of these twenty-nine were cases of iritis or cyclitis, the left eye predominating. Hypopyon existed in two of these cases, eight and five years after the infection, respectively. His experience accords with that of Schmidt-Rimpler, that in iritis with the formation of nodules, as a rule, true gummata are not present, and he includes in his syphilitic cases all that occurred after infection but responded to specific treatment. The symptoms vary very little from iritis due to other causes. Syphilitic choroiditis is always exudative; he has never seen a purulent case that he could attribute to this cause, and as regards syphilitic chorio-retinitis, he thinks the process generally primarily involves the choroid and that the retina is only secondarily involved.

81. **Scopolamin and Atropin.**—From thirty cases selected from private and dispensary practice, tested with scopolamin and atropin to ascertain the relative action of the two, Rogers finds that the results of scopolamin contrast unfavorably with those of atropin. In only one of the thirty did both eyes show the same refraction under each drug. He concludes that as a final reliance scopolamin is untrustworthy.

82. See paragraph 103.

84. **Anesthetics.**—Levers gives the details of administration, favoring chloroform, and offers the following conclusions: 1. In most cases chloroform is to be preferred to ether, as it is more pleasant to patient, the after-effects are less marked, and we believe, if statistics were accurate, it would be equally as safe as ether. 2. Where possible, the patient should be prepared for the anesthetic. 3. One of the most important and successful steps in the administration of an anesthetic is to secure the full confidence of the patient. 4. The anesthetist should not be made nervous by the surgeon's suggestions. 5. Chloroform should be given slowly, with plenty of air, by the "drop-by-drop" method.

89.—See abstract in THE JOURNAL, xxxiv, p. 1491.

95. **Fireman's Cramp.**—This disorder is but little mentioned in journals or text-books, but it is, according to the author, a very real one to the workers in the fire-rooms of steamers. The sufferers generally undertake their duties when in a deteriorated condition from shore excesses and are subjected to the most serious conditions of temperature and exposure otherwise. Cummings, finding the stock remedy for this disorder to be something akin to "sun cholera mixture," he sought for a substitute which could be freely used without leading to gastric and bowel disturbances. The one he devised consists of the following prescription: 256 gr. each of calcium, sodium and potassium phosphates in one gallon of water, with an excess of ortho-phosphoric acid. For the use of nine men in four hours, 6 ounces was put up in nine gallons of water containing oatmeal and ice, if available, each man drinking appproximately a gallon of water during watch, which would give about 3.5 drams of phosphate solution per man. The effect was immediate, and "phosphose," as they called it, was in daily demand. It was observed during the time of its continuous use that the men would not use it occasionally for several watches; when asked why, they said that they didn't feel the need of so much of it, as what they had already taken had braced them up sufficiently. He claims, by the use of this mixture, he has relieved colic and cramp and stimulated a natural desire for food and in consequence that he got more and better work from a class of men whose labors and pains are but little understood by those who know only the saloon-deck life of the sea.

96. **Amelia.**—Ballantyne reports the result of examination of a kitten in which the right forelimb was absent, and reviews the reports of others who have observed the condition of the cord in some instances in the human subject. The conclusions to which he comes are largely negative. If the changes in the spinal cord are absent, this can not be said to prove that the absence of the limb is due to arrested development of the central nervous system, or an atrophic center does not prove that arrested development of the cord is the cause of this deformity. The third theory is that the pressure of the amnion over that part from which the limb springs causes complete or partial lack of development. This theory also is not absolutely supported. His study of the question leaves it in the following state: In some cases, absence of the limb may be due to, or associated with, defective development of the corresponding part of the spinal cord. In other cases, pressure from the amnion often prevents the growth of the limb or a part of it, therefore causing injury in the cord, and in yet other cases, especially in the absence of one or more digits, the defect may be due to amputation of the parts by amnion bands or other agencies *in utero*, and the changes in the cord be secondary.

97. **Secondary Syphilis.**—According to Frick, secondary syphilis should be classed with eruptive fevers. The importance of being able to recognize secondary eruption is shown by considering the fact that it is frequently the first intima-

tion of the disease, the primary sore having been too obscure to be recognized. This is the specially contagious period of the disease and the period for active treatment. Macular eruptions are usually the earliest manifestations of secondary symptoms, and he calls attention to the importance of condylomata lata as a diagnostic feature. The mucous patch comes near being a constant factor and is sometimes difficult to control. He has had serious trouble with syphilitic paronychia. Mercury must be our sheet-anchor in this stage, but must not be pushed to the patient's disadvantage. Where patients can not use the drug internally, he uses inunctions, also Turkish baths. He does not like the hypodermic method, and would not use it except where a very rapid effect of the drug is required. Frequently a good tonic is of benefit along with the mercurial treatment. Iodids are not indicated until very late in the secondary stage.

98. **Insolation.**—Simpson describes the symptoms of thermic fever, which is common in children, of heat prostration which may or may not have a high temperature, and of true insolation, or sunstroke. In the first-named rapid stimulants which act on the skin will suffice to establish the equilibrium. Caffein, ammonia, champagne, cool cloths to the head and something cool to drink will soon set the patient right. The digestive disturbances need not be seriously regarded. Practically the same holds good for heat prostration. A cold douche to the head followed by ice-cloths, cool sponging and some rapid stimulant will usually be sufficient. Drugs may be given subcutaneously if necessary. There are occasionally cases of meningitis following such attacks, but it is not certain they are caused by them, as they may have pre-existed. The most disagreeable effects of heat prostration are usually neurasthenia and hysterical symptoms. True sunstroke, however, is different; it almost always leaves defects. The treatment is substantially the same as that of the other forms, only more urgent and thorough. He does not believe in bleeding or transfusing sunstroke patients. When the patient is placed in bed, he must be watched, and when the temperature has been reduced to 102 or 103 F., the necessity for further reduction is not great, and should be proceeded with judiciously. As soon as the return of consciousness and respiration is established, the danger of immediate fatal issue is over. Judicious stimulation should be administered. After consciousness has returned the patient must receive the same care as a patient suffering from severe febrile disease. The urine and perspiration must be watched. Bad results may come later.

100.—This article has appeared elsewhere. See THE JOURNAL of August 4, title 81, p. 319.

103. See paragraph 82.

104. **Drainage of the Abdominal Cavity.**—The literature of drainage of the abdomen is reviewed by Sharpe, who considers that it is definitely and positively indicated in selected cases, such as special gall-bladder conditions, weakened intestinal walls, intestinal suturing of special character, and various other pathologic states. He thinks that, however, as a routine policy it is capable of great restriction by permitting our technique to be governed by a series of rules in accordance with these suggestions: 1. Better protection of non-infected areas. 2. Better cleansing of infected areas. 3. Better covering-in of raw surfaces. 4. Better hemostasis. 5. Greater attention to details of operative asepsis. 6. Greater gentleness and skill in operative technique.

113 and 114. **The Watery Extract of Tubercle Bacilli in Phthisis.**—Osborne has followed Von Ruck's method of treatment in tuberculosis with, as he thinks, great advantage. He believes the superiority of true tuberculous substance in the form of watery extract is attested by unmistakably better results in clinical employment as well as in the animal experiments of Von Ruck. In a letter following Osborne's paper, Von Ruck argues that antitoxins are ineffective in phthisis, since the symptoms of the disease are not due to absorption of the bacillary toxins. He thinks, therefore, that since the symptoms in all stages of the disease react to these latter, this is evidence in favor of his view. He holds also that the direct injection of toxins produces immunity and is therefore justified from a therapeutic point of view.

119. **Stenosis of the Pylorus.**—Bettmann criticizes the surgeon's idea of stenosis of the pylorus, that it occurs so frequently and just so often requires operative interference. Medical experience, he thinks, does not bring out these conclusions, and an appropriate abstinence treatment and enforced rest would, in many cases, have as efficient effect as the operation itself. The subject, he believes, is not sufficiently treated in text-books.

122. **Corneal Ulcerations.**—The general principle of the treatment of corneal ulcers, of which Tennent gives the various types, is to begin treatment, especially in acute cases or in strumous children, with a mercurial. Find out the cause. In children and most adult cases internal medication is more important than local measures. Mercury has the widest application internally and next to it tonics and reconstructives. The local measures consist in: 1, preservation of cleanliness; 2, relief of pain; 3, application of mildly stimulating remedies; 4, scraping with an application of stronger stimulants and antiseptics; 5, cauterization.

123. **Laryngeal Phthisis.**—The treatment recommended by Cheesborough for this condition consists in first watching the general health of the patient, giving tonics and digestants when necessary, and large quantities of nourishing and easily digested food. Well-directed exercise and plenty of fresh air in a suitable climate should be insisted upon. Creosote he holds of value in every case of tuberculosis when carefully and properly administered. Begin with a few drops and increase the dose daily until the patient begins to suffer from some gastric disturbance, then go back to the small doses and gradually increase again. Nearly every patient can take creosote thus administered. For local use he employs alkaline and antiseptic washes to thoroughly cleanse the nose and throat, following these by inhalations of glymol with menthol, and ether or iodid and ether, or other drugs found to be soothing, and an anodyne for checking the cough. In a certain percentage of cases the curette and lactic acid are necessary. His method is to first curette and begin with a 3 per cent. solution of lactic acid, gradually increasing its strength as required. It is often necessary to use local anesthetics when curetting. Laryngotomy, laryngectomy and tracheotomy should be limited to only the most exceptional cases.

127. **Static Electricity.**—Lowder claims great success with static electricity in neuralgia and headache, using a sort of general electrization. He claims that he has cured about 85 per cent. of his selected cases. For rheumatism he relies almost altogether on electricity and in painful menstruation he has never had such beneficial results from any other remedy Other disorders which he claims to have successfully treated in this way are insomnia, amenorrhea, malaria, incipient colds, senile debility, bronchitis, gastralgia, cardiac disorders, heat prostrations, etc.

FOREIGN.

The Lancet, August 25.

Pathology and Therapeutics of Scurvy. A. E. WRIGHT.—In defense of the theory formerly maintained by him that scurvy is a condition of acid intoxication with deficient alkalinity of the blood, Wright undertook a series of blood examinations and therapeutic experiments on cases which came under his control in the Army Hospital at Netley. The normal alkalinity of the blood is such that the addition of one volume of normal acid thirty-five times diluted to an equal volume of serum just suffices to deprive that serum of its power of blueing sensitive litmus paper. Seven cases of marked scurvy were tested and in each case the alkalinity of the blood was found strikingly reduced, and in all, excepting in one where there was reason to suppose that the drug was not dissolved, a decided amelioration followed the administration of lactate of soda and other similar substances. Certain subsidiary points were also noticed. In three of the cases there was a dysenteric complication, but this differed from the ordinary dysentery in its clinical features and also in the fact of reduced alkalinity of the blood. In one of the cases it appears that the scorbutic conditions could supervene and complicate typhoid fever.

The Pathogeny of Gout. DYCE DUCKWORTH.—The pathogeny of gout and its theories are discussed by Duckworth, who

sums up his own conceptions in regard to it as follows: "That gout as a morbid condition, depends on an inherent vice of nutrition, which is manifested by an imperfect metabolism in various organs or parts of the body, presumably in the kidney and probably in the liver. That this trophic disorder or inadequacy—*ralentissement de nutrition*—leads to the formation of uric acid, probably in excess, and to the periodic retention of it in the blood—gouty uricemia. That histology throws no light on the intimate nature of this defect, which thus relates to cellular potentiality, possibly under neurotrophic influence, and not, so far as we know, to structural alteration. That this textural disability, or a tendency to it, may be primarily acquired and also transmitted as a fault, thereby inducing from time to time uricemia with gouty manifestations in the descendants. That in most instances, under conditions which provoke it, and in some cases independently of these, attacks of gout may grow up and come to a crisis. Such crises are attended by an alteration in the solubility of the uratic salt in the blood, whereby irritating crystals of biurate of sodium are produced and precipitated in various parts of the body. That a paroxysm of gout, the sites of its occurrence, and its metastases are determined by nervous influences, probably dominated from a bulbar center, and that the local attacks alight either in the joints or in textures which have been weakened or rendered vulnerable by impaired nutrition owing to past injury or over-use. That this central neurosis is an essential and transmissible feature in the pathogeny of gout and pertains to the arthritic diathesis generally. That the uricemia of gout is peculiar and unlike that which is induced by other morbid conditions, but that the occurrence of uricemia in the gouty is by itself inadequate to induce attacks of gout. That uratic deposits may occur to an enormous extent in gouty persons without the occurrence of any pain or paroxysms. That the clinical features of gout indicate that both hemic changes—due to inherent morbid tissue metabolism—and a neurotrophic disturbance act as pathogenic factors, and that consequently gout is to be regarded as a neurohumoral malady."

Diphtheria in the Horse. LOUIS COBBETT.—The author examined the cultures of the bacillus found in a nasal discharge of a pony, which appeared to be entirely identical with that of diphtheria. The animal had purulent, slightly sanguineous, nasal discharge, subsequent enlargement of the glands under the tongue, laryngeal obstruction, difficulty of breathing and contraction of the abdominal wall. He concludes from his study of the case that the horse is liable to nasal and laryngeal diphtheria, and that this is of practical importance since it points out a hitherto unsuspected channel of conduction of the disease to man. It also has a bearing on the question of the origin of antitoxin. It is well known that the serums of normal men and horses which have never been immunized often have the power of neutralizing diphtheria toxins and it is shown, in the cases of horses at least, that this defective serum unites with toxoids as well as with toxins proper, just as does the serum of immunized animals, that, in a word, it contains true antitoxin. The diphtheria antitoxin found in many is probably due, as Wassermann has suggested, to some previous attack of diphtheria, possibly not recognized, and that found in the placental blood of infants may have been due to the mother having had the disease. Now that we find the horse is subject to diphtheria, the presence of antitoxin in its blood-serum is easily explained.

Enteric Fever. DERWENT PARKER.—The author gives his experience with 100 cases of enteric fever treated by him in South Africa. One of the first points noted is the great difference in the virulency of the attack according to the district from which it comes, those from certain regions having been almost all of severe type, while the later cases, no matter where they came from, were milder than those of earlier date. The most severe cases were infinitely worse than any he had seen in England. One patient had seven distinct perforations, and two, had they lived longer, would have had even more, as every Peyer's patch in the last few feet of the small intestine was gangrenous. The hospital was situated at an elevation of 4500 feet and was made up of tents with excellent ventilation. Lung complications, however, were very rare. All the patients took 5 minims of carbolic acid in water three times a day. He found that to some extent carbolic acid appeared to have a tendency to increase the frequency of hemorrhage, but on the whole he thinks its effects are good. Apparently brandy was the most useful stimulant. Transfusion with normal salt solution he thinks, can save a great many lives in cases of severe hemorrhage. From his studies of the effects of inoculation he finds the death-rate among the inoculated 2 to 3 per cent. lower than that of the non-inoculated, and while the average temperature for the first ten days was 0.9 per cent. lower, it was 5.4 days longer before becoming normal. He does not consider inoculation as at present practiced a striking success.

Janus (Amsterdam), August.

Organotherapy, Past and Present. H. GRASSET.—The question of internal secretions is intimately connected with that of organotherapy, but no one seems to comprehend the important relations between the soluble ferments and these questions. A. Bechamp has explained the transition between the medical traditions of the ancients in respect to organotherapy and the facts discovered, but erroneously interpreted, by modern bacteriologists. He asserts that the cell is not the organic vital unit. It is, according to him, an association of autonomous and independent organisms, which he calls "microzymes." Each secretes its soluble digestive ferments or zymases, which allow it to modify the medium in which it lives, and assist in its absorption, assimilation and growth. Each zymase characterizes the physiologic function of the microzyme in the cell and in the organ, the function varying with the species of the animal and the age of the individual. Grasset accepts this theory and adds that these soluble ferments are excessively fragile; the slightest cause destroys them. Chemical or physical manipulations injure or kill the vital principles in the organs and hence the present methods of extraction for therapeutic purposes are all defective.

Annales de l'Institut Pasteur (Paris), July 25.

Sero-Agglutination in Pneumococcus Infection. F. BEZANCON and V. GRIFFON.—The Widal agglutination test is not applicable to pneumococcus infection, as the phenomenon is not sufficiently marked to be evident in diluted serum. But with cultures of the pneumococcus in non-diluted serum the reaction becomes very distinct. Tests on 186 persons demonstrated, however, that the serum agglutinates most decidedly, and in some instances exclusively, the pneumococci derived from the individual lesion. This individuality in respect to the agglutinating reaction which has been established for the pneumococcus and bacillus coli, throws light on the disputed question of the unity or plurality of streptococci. The serum of animals vaccinated against the streptococcus seems to have real preventive or curative action only against the special streptococcus that served for the vaccination.

Influence of Tetanus Toxin on Central Nervous System. M. JOUKOWSKY.—The only modification in the nerve-cells constantly noted in this experimental research in Metchnikoff's laboratory was an accumulation of migrating, mononuclear cells around the nerve-cells and their penetration into the protoplasm of the latter. The phenomenon was most marked in the anterior horns and most intense in chronic intoxication. It is probably the expression of the mononuclear phagocytosis which develops under the influence of the toxin in the nerve-cell and is a sign of diminishing cell vitality.

Bulletin de l'Academie de Medecine (Paris), August 14.

Physiology of Cervical Sympathetic. T. JONNESCO and T. FLORESCO.—Applying to man the technique of experimental research, the Bucharest scientists have established the identity of the functions of the cervical sympathetic in man and in animals. Their subjects were patients on the point of having sympathectomy performed. The member of the Académie who presented their article in a condensed form, remarked: "It is not without a certain emotion that one follows the authors in the recital of their experiences, and imagines the patient under the influence of choloroform, undergoing the various operations performed for experimental purposes on the cervical sympathetic and its ganglia, with graphic exploration of the heart action and respiration, and of the pulsation of the exposed brain. If the results attained prove to be valuable be-

yond dispute and do not require confirmation, one must not criticise the authors unfavorably for the hardihood of their attempts. At least they had no serious consequences for the patient, such as follow experimental, direct, electric stimulation of the brain, and consequently can not be condemned, as the latter justly is." The research demonstrated that stimulation of the superior stump of the sympathetic after resection produces the same effects as stimulation of the intact nerve. The vasoconstrictive action of the sympathetic on the brain was also demonstrated, and the fact that weak stimulation has the opposite effect, i. e., the smaller vessels are dilated, similar to the influence of the same nerve on the superficial circulation. When the heart has been accelerated by stimulation of the sympathetic, it is not retarded by the section of the nerve. Injection of pilocarpin induces sweating on the sound side but not on the operated side after section of the sympathetic and subsequent degeneration of the sweat fibers. The most important result of their research is the demonstration that no appreciable nutritional modifications occur in the regions innervated by the resected nerve. This latter statement needs confirmation. Surgeons should take special pains to follow their patients after sympathectomy to note whether there is deterioration in the functional activity of the brain and ocular apparatus.

Herpes in Infectious Diseases. E. VIDAL.—By the term "herpes" Vidal expresses the attempt of the tissues to eliminate foreign bodies, whether it takes the form of an eruption on the skin or a morbid process in some internal organ or tissue. This manifestation is especially characteristic of la grippe. The bacillus penetrates into the organism by some unknown means; the struggle begins, fever lights up, the organism tries to expel the foreign bodies and the cycle is completed by the herpetic eruption within or without. This eruption produces solutions of continuity and any secondary germs which may happen to be in the vicinity find an easy entrance through them into the tissues. If the herpetic eruption happens to be in the lungs, for instance, and the pneumococcus is present, secondary pneumonia is liable to develop, as the germs invade the capillaries, with possibly further infection by them of the arteries, peritoneum, kidneys and spleen. "This conception explains many otherwise inexplicable problems in infectious processes, their successive localizations on different organs, recurrences, etc., and should be accepted until the contrary is proved."

Antisepsis for Contagious Diseases With Only Partial Isolation. GRANCHER.—The results obtained by Grancher in a medical ward at the Hôpital des Enfants during the last ten years—in comparison with the preceding ten—confirm his assumption that contagion is seldom if ever air-borne, but occurs solely by direct contact. The ward is frequented by students, is in an old building, and children with measles, diphtheria, scarlet fever, whooping-cough, bronchopneumonia and mumps are received indiscriminately, but contagion from one to the other is extremely rare. In ten years there has only been one case of diphtheria, scarlet fever or mumps from this cause, seven of whooping-cough and 1 to 3 per cent. of all the cases of measles. The latter is the most difficult disease to manage, as contagion may occur before the diagnosis is possible. He treats a patient with one of these infectious diseases as he would a wound, and applies antisepsis in the same way, with partial isolation. A lattice-work screen, about four feet high, is placed around the bed, entirely enclosing it. This prevents contact between the children and reminds the attendants that certain precautions are necessary before entering the enclosed space. These precautions are to put on a blouse, which is kept permanently in the "box," and to wash the hands with soap and a 1 per cent. solution of sublimate. All the dishes used by the child are disinfected with boiling water, while the bedding and dismounted bed are sterilized in the oven. The paraffined floor and the walls are washed off twice a week with the same solution of sublimate. This idea that contagion is objective and not atmospheric, and that it can be controlled with antisepsis, should dominate in the care of all hospitals for children.

Revue de Gynecologie (Paris), July-August.

Study of Autoplastic and Temporary Sutures. L. DARTIGUES.—After reviewing the various methods, Dartigues asserts that temporary sutures best fulfill the condition for non-infection of the wound in operating for hernia, the incision as short as possible, extensively freshening the rectus muscles and suturing the inner margins together, and above all, securing perfect hemostasis. For esthetic reasons the suture should be as low and as intradermic as possible. He commends Segond's practice of combining an autoplastic suture of the deep tiers, with a couple of figure-eight silk sutures above, and a superficial suture of silver wire. The figure-eight stitch is especially useful for hysteropexy. Among the forty-one illustrations are two portraying the old corkscrew method, showing the corkscrew inserted to close the inguinal wound, burrowing through the deep tissues and removed as the wound healed. It crudely answered the purpose of the modern metallic, removable sutures.

Remote Results of Abdominal Hysterectomy for Cancer of the Cervix. C. JACOBS.—Every one of 70 patients with cancer of the uterus, treated by vaginal hysterectomy, died of recurrence within a few months; only two survived as long as two years. On the other hand, out of 52 abdominal hysterectomies 13 are still alive without a trace of recurrence—several operated on more than twenty-seven months ago. The recurrence in the rest was torpid and comparatively painless. Jacobs urges immediate intervention if on several occasions the cells in the vaginal or glandular secretions are found enlarged, irregular and granulated, isolated or connected by strips of new-formed tissue. He never performs hysterectomy unless convinced that the lesion is restricted to the uterus. He removes the organ in two portions after severing the ovarian arteries, dividing it above the internal orifice and thermocauterizing the cavity of the cervix before proceeding.

Pulmonary Embolism After Fibromectomy. G. MICHEL.—Postoperative thrombosis may be feared in women exsanguinated by repeated metrorrhagias induced by a large fibroma compressing the organs in the small pelvis. The thrombosis may be in the pelvic veins, in which case the absence of valves renders it generally fatal. Only three cases of pulmonary embolism from this cause have been known to recover. There are 13 deaths on record from pulmonary embolism consecutive to the removal of fibrous tumors of the uterus, out of a total of 568 abdominal or supravaginal operations, and seven deaths in 209 vaginal. The heart is usually degenerated in these patients, and, as it is unable to overcome the obstacle in the circulation by stronger contractions, can only accelerate the beat. The rapid pulse in contrast to the normal temperature is the sole sign of a hidden thrombosis. Before undertaking any gynecic operation the vascular system should be examined. If the veins are hard and painful, the pulse rapid, with more or less edema of the lower limbs, intervention should be postponed if possible, until conditions are more favorable.

Centralblatt f. Bakteriologie (Jena), July 11.

Experimental Research on Rabies. V. SOLOMON.—Galli-Valerios recommends inoculating animals with rabies on the nasal mucosa as the most effective method and the least dangerous for the operator. Leclainche's intracranial method is also exceptionally effective. Both normal and pathologic bile have a neutralizing influence on the virus of rabies.

Centralblatt f. Inn. Med. (Leipsic), July 14.

Urotropin in Cystitis. B. GOLDBERG.—The experiences described suggest an explanation for the contradictory results attained by others with urotropin in the treatment of cystitis. Goldberg found that 40 per cent. were cured and all the rest materially improved in his 54 cases of cystitis due to primary bacterial invasion of healthy organs. It also proved effective when the cystitis was consecutive to other affections if combined with other measures. But it was useless in secondary cystitis with ascending infection or incipient urinary intoxication.

Acute Effusions in the Pericardium. F. APORTI.—A series of tests on cadavers showed that it is impossible to detect a pericardial effusion by percussion if the amount is less than 150 to 200 c.c. The maximum amount that can collect is 650 to 700 c.c. In a horizontal position the area of cardiac dulness spreads out in all directions, the large vessels are

bathed in fluid, even with a small amount, but when the body is erect, the base of the heart is free with the maximum of accumulated fluid.

Deutsche Medicinische Wochenschrift (Leipsic), August 16.

Aneurysm Cured by Electrolysis of an Introduced Wire. A. BERNHEIM.—Our Philadelphia colleague describes another case of an extensive aneurysm of the aorta cured with the introduction of fine gold wire and electrolysis. It is the fifteenth instance of this treatment on record and is distinguished by the fact that the operation was repeated three times in a few months before the cure was permanent. Four of the fifteen cases were very much improved, five were cured and all relieved by the intervention—results which should encourage its further application. In the experience reported nearly nine feet of a spirally coiled fine gold wire were inserted, and the anode applied, with the cathode on the back. A current of 10 to 80 milliamperes was turned progressively on and off during one hour. The sac slightly contracted and the pulsation diminished even before the operation was concluded. The results of the intervention were examined with an exploratory puncture two months later and about the same amount of wire introduced again, and half this amount thirty-nine days afterward. The patient was dismissed four weeks after the last intervention and has resumed his business as a commercial traveler.

The Tubes in Roentgen Ray Therapy. STRAETER.—In the therapeutic application of the Roentgen rays, the "soft" tubes should be selected for superficial pathologic processes, and the less "soft" for the deeper lesions. Very "hard" tubes are unsuitable for Roentgen therapy.

Is the Action of Alcohol Nutritional or Toxic? KASSOWITZ.—The well-known Vienna professor presents numerous arguments to prove that it is impossible for a substance to play the dual rôle of a food and a toxin at the same time, and that alcohol in particular never possesses nutritional, but always and exclusively toxic, properties.

Memorabilien (Heilbronn), July and August.

Infarct of the Lungs. C. C. ROTHE.—A healthy young man was being treated for a phlegmon of the thigh, which had developed subsequent to exposure, and spread to include nearly the entire thigh, with symptoms of cardiac insufficiency. He was progressing favorably by the twelfth day, but succumbed the seventeenth to an embolism in the lungs, evidently originating in the veins of the thigh. In another patient a fatal serous effusion filled the right thorax in the third week of a mild abdominal typhoid fever. A second case of typhoid pleuritis was marked by the absence of an effusion and the evidences of thrombosis in the lungs, evacuation of drops of dark blood by puncture, etc. It terminated in recovery.

Mittheilungen a. d. Grenzgebieten der Med. u. Chir. (Jena), vi, 1 and 3.

Infusions of Salt Solution. LEONPACHER.—Summarizing the experiences in 100 cases treated with infusion of salt solution, Leonpacher states that the effect was favorable but transient in 8 cases of severe burns, all terminating fatally. The anuria was not influenced by the infusion. The amount found most beneficial in acute anemia was 1000 to 1500 c.c. at 40 C., repeated several times. For chronic losses of blood, 500 c.c. at 40 C. were injected every day for a long period. The same amount was injected in collapse after operations and long narcosis. In septic affections 1000 to 2000 c.c. were slowly injected at body temperature. The effect is chiefly stimulating in this case. Local injections of 8 to 10 c.c. were made in five cases of ulcus molle. The ulcus progressed to superficial suppuration and rapid retrogression in eight to ten days in 2. In 2 others it retrogressed in fourteen to twenty days without suppuration. The fifth was a hard, indolent bubo and was only temporarily improved.

Recurrences After Gall-Stone Operations. A. HERMANN.—In Hermann's experience as superintendent of the hospital at Carlsbad, he has observed eleven cases of unmistakable recurrence of biliary calculi after a successful operation from eight months to three and one-half years previously.

Carcinoma of the Skin Cured With the Roentgen Rays. THOR STENBECK.—A healthy woman of 72 years applied for relief from a typical ulcus rodens which had been slowly developing on the nose during ten years. As she shrank from an operation, Roentgen treatment was first tried. The ulcus suppurated freely at first and then healed over in the course of thirty-five sittings, although a month more was required to banish the last traces of the neoplasm.

Experimental Contribution to the Study of Cholelithiasis. H. EHRET.—Normal bile in guinea-pigs, cattle and dogs is by no means sterile. Microbes were found in the bile of nearly every animal examined. They probably make their way from the intestines through the biliary passages. Isolated germs occasionally find their way into the bile from the circulation, but these are exceptional cases and the microbes in the bile are a manifestation of pathologic processes.

Laparotomy in Case of Tubercular Peritonitis. A. BORCHGREVINK.—After twenty years of special clinical and experimental study of this subject, Borchgrevink states that in the healing process the shriveling nodule becomes transformed into a loose network of fine fibers. This is gradually absorbed and the tubercle vanishes as completely as any other ordinary granulation tissue after a transient, harmless irritation. This primary healing of the tubercle, as he calls it, is of frequent occurrence in ordinary peritoneal tuberculosis unaccompanied by caseous foci. Serous tubercular peritonitis, with slight or no fever, recovers spontaneously by this mechanism, and laparotomy is superfluous. On the other hand, laparotomy is distinctly injurious in the progressive cases with continuous fever. Laparotomy should therefore be rejected in all cases. Puncture at the right moment is fully as effective. As long as the tubercle is keeping the peritoneum irritated no operation has any curative effect, but when the healing has reached a certain stage laparotomy or puncture are both equally effective.

Experimental Antiperistalsis. R. MUEHSAM.—A long portion of the small intestine was resected in some experiments on a couple of large dogs and, sutured in place, reversed. The results showed that the reversed intestine was able to make peristaltic movements in the direction contrary to its natural peristalsis sufficiently vigorous to propel the food along, although vomiting occurred at times, evidently from return to its natural peristalsis. In one of the animals the natural peristaltic movements were so vigorous that the upper transplanted end became invaginated in the normal distal intestine.

Monatschrift f. Geb. u. Gyn. (Berlin), July.

Uterine Calculi.—The report of the meeting of the St. Petersburg Medical Society describes several specimens of uterine calculi exhibited or cases described. In one the uterus was entirely filled with stones the size of a bean to that of a walnut. In another, multiple myomata had become "petrified" from the same cause. A fibromyoma in another case was full of a purulent fluid, the walls lined with calculi in the form of scales. A specimen in the Kazan museum was mentioned in which the petrifaction is as hard as granite.

Muenchener Medicinische Wochenschrift, August 31.

Prevention of Pneumonia After Laparotomies. G. KELLING.—Pneumonia consecutive to laparotomies in the upper abdomen may be due to infection from germs in the air, which may find their way under the diaphragm and thence into the lungs. To prevent this Kelling has studied to reduce the number of germs in the air as much as possible. His operating-room is large and the windows open on a green garden, instead of on the street. The room is heated from without. The heating apparatus does not draw its air from the room, as this would aspirate a fresh supply through the crevices. All windows are closed four hours before an operation, after the walls and floors are dampened. As soon as the abdomen is opened the cavity is stuffed with gauze to prevent the entrance of air as far as possible. The floor is kept wet, the operator and assistants wearing rubbers. Entrance is through a small anteroom with double doors. Operating is not so agreeable under these circumstances to the surgeon, but his inconvenience is far outbalanced by the entire absence of postoperative pneumonia. He had five cases occur in the corresponding period in

an equal number of patients the year before he fitted up this room.

Sugar to Increase Uterine Contractions. M. MADLENER.—In three of the six cases in which the writer has employed sugar to increase the energy of the contractions of the uterus, the pains were much diminished, while the contractions were increased. The latter effect was evident in all but one, and he recommends the general use of sugar for this purpose as simple, harmless and effective.

Wiener Klinische Wochenschrift, August 9 and 23.

Total Exclusion of the Intestine. E. PAYR.—An erosion of the intestine in consequence of a deep suppurating process in the abdominal cavity demanded that the communication between the cecum and the abscess cavity should be shut off. The condition of the patient contraindicated total exclusion, and an ileocolostomy was done, the ends of the intestine closed with a circular seromuscular drawn thread. After a few days of apparent success fecal matters were discharged through the fistula. Analysis of similar cases in the literature shows that fold-sutures, draw-strings and ligatures are extremely unreliable as means of closing the ends of a section of intestine. It is far from certain that the closing of fecal fistulæ, spontaneously or with slight operative assistance, is any guarantee that the morbid process is positively terminated, unless the inside is cauterized. The cases in which the secretion in the excluded portion seems to have completely ceased, with no previous cauterizing or antiseptic measures, will be found in most instances to be due to occlusion of the fistula, while the secretion continues accumulating in the depths, even in case of a normal intestine, and there is always danger of an outbreak. In many instances the total, blind exclusion is only apparent, and in reality secondary adhesions and perforation allow the escape of the secretions. In a case of Hochenegg's a mass of fecal matters was suddenly evacuated from the supposed excluded portion, fourteen months after operation. Of the thirty total exclusions noted in the literature, two only succumbed at the time of operation. Experience with intestinal diverticula, etc., confirms Payr's dictum that the complete exclusion and blind closure of a portion of the intestine is liable to induce pathologic changes.

August 23.

Treatment of Epilepsy. M. BIRO.—Eight years of observation of the results of treatment of 185 epileptics have convinced Biro that the bromids are the best general therapeutic measure, but if they fail, Flechsig's method should be tried, resorting later to Bechtereff's, atropin or a combination of bromids and antipyrin. He comments on the periodicity in the recurrence of the seizures.

Gazzetta degli Ospedale (Milan), August 19.

Occlusion of Biliary Passages by Hydatid Cyst. L. FERRALASCO.—The hydatid cyst in the case in question had developed insidiously in the liver until it had perforated into the biliary passages, with occlusion and dilatation of the ducts from the remnants of the cyst. This had induced circumscribed purulent angiocholitis and laceration of the liver with fatal hemorrhage.

Cronica Medica (Lima), June 30.

Diazo-Reaction in Microbian Diseases. E. E. ESCOMEL.—A study of Ehrlich's diazo-reaction in eighty patients showed that the test resulted positively only in miliary tuberculosis, tubercular meningitis, typhoid fever or typho-malaria, smallpox, erysipelas and the last stages of pulmonary tuberculosis. It was invariably negative in malarial and rheumatic affections. The positive result of the diazo-reaction thus excludes certain diseases and is a valuable aid in the differentiation of typhoid fever.

St. Petersburger Medicinische Wochenschrift, August 18.

Symptoms and Treatment of Disorders Due to Trichocephalus. T. HAUSMANN.—Microscopic investigation of the feces should become a routine measure in all dubious cases and rank with the analysis of the urine. Many affections now classed as rebellious hysteria or gastric catarrh would disclose their true etiology if this were done, and would respond promptly to appropriate measures. Hausmann requests the patient to bring him a little of his feces, preferably of soft consistency, in a liqueur glass. A scrap is transferred to an object glass with a toothpick; a drop or two of glycerin is added, if hard, and a cover-glass placed over it and rubbed around a little. Eighty-five diameters is sufficient at first, increasing the magnifying power if suspicious objects are noted. The symptoms caused by the trichocephalus are manifold and simulate many affections; the only specially characteristic sign is extensive cutaneous anesthesia occasionally noted. In one of the instances he cites, a young and healthy man became emaciated, constipated, with abdominal pain and impotentia coeundi, diminished reflexes and other symptoms, becoming progressively worse as the months passed. Three days of thymol—prescribed after the eggs of the trichocephalus were found in the fecal matters—restored him to complete health, but the cure was repeated not long after as a precautionary measure. Thymol seems to have a specific action against this parasite, far more powerful than santonin or other remedies.

Books and Pamphlets.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

BOOKS.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell A.M., M.D., Director of the Ayer Clinical Laboratory of the Pennsylvania Hospital, with the Collaboration of John Ashhurst, Jr., M.D., LL.D.; Charles H. Reed, M.D.; and James T. Whittaker, M.D., LL.D. With Regular Correspondents in Montreal, London, Paris, Leipsic, and Vienna. Volume II. Tenth Series. Cloth. Pp. 300. Price, $3.00. Philadelphia: J. B. Lippincott Co. 1900.

THE RETROSPECT OF MEDICINE. A Half-Yearly Journal Containing a Retrospective View of every Discovery and Practical Improvement in the Medical Sciences. Edited by James Braithwaite, M.D., Consulting Obstetric Physician and Surgeon to the Leeds General Infirmary, and E. F. Trevelyan, M.D., B.Sc., M.R.C.P., Assistant Physician to the Leeds General Infirmary. Volume 121. January-June, 1900. Cloth. Pp. 431. Price, $2.50 per year. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd.

ATLAS AND EPITOME OF DISEASES CAUSED BY ACCIDENTS. By Dr. Ed. Golebiewski, of Berlin. Authorized Translation from the German, with Editorial Notes and Additions. By Pearce Bailey, M.D., Consulting Neurologist of St. Luke's Hospital and the Orthopedic Hospital, New York. 40 Colored Plates, and 143 Illustrations in Black. Cloth. Pp. 549. Price, $4.00. Philadelphia: W. B. Saunders & Co. 1900.

CANCER OF THE UTERUS: Its Pathology, Symptomatology, Diagnosis, and Treatment; also the Pathology of Diseases of the Endometrium. By Thomas Stephen Cullen, M.B., Associate Professor of Gynecology in the Johns Hopkins University. With Eleven Lithographic Plates and Over Three Hundred Colored and Black Illustrations in the Text. By Max Brödel and Herman Becker. Cloth. Pp. 672. Price, $7.50. New York: D. Appleton & Co. 1900.

A MANUAL OF PERSONAL HYGIENE. Edited by Walter L. Pyle, A. M., M.D., Assistant Surgeon to Wills Eye Hospital, Philadelphia. Contributors: J. W. Courtney, M.D.; George Howard Fox, M.D.; E. Fletcher Ingals, M.D.; Walter L. Pyle, M.D.; B. Alexander Randall, M.D.; G. N. Stewart, M.D., and Charles G. Stockton, M.D. Illustrated. Cloth. Pp. 344. Price, $1.50. Philadelphia: W. B. Saunders & Co. 1900.

A MANUAL OF CHEMISTRY: Inorganic and Organic, with an Introduction to the Study of Chemistry. By Arthur P. Luff, M.D., B.Sc., F.R.C.P., F.I.C., Physician to Out-Patients in St. Mary's Hospital, and Frederick James M. Page, B.Sc., F.I.C., Associate of the Royal School of Mines. Illustrated with 40 Engravings. Cloth. Pp. 541. Price, $1.60. London, Paris, New York and Melbourne: Cassell & Co., Ltd. 1900.

ATLAS AND EPITOME OF GYNECOLOGY. By Dr. Oskar Schaeffer, Privat Docent of Obstetrics and Gynecology in the University of Heidelberg. Authorized Translation from the Second Revised and Enlarged German Edition. Edited by Richard C. Norris, A.M., M.D., Surgeon-in-charge, Preston Retreat, Philadelphia. With 207 Colored Illustrations on 90 Plates, and 62 Illustrations in the Text. Cloth. Pp. 272. Price, $3.50. Philadelphia: W. B. Saunders & Co. 1900.

DISEASES OF THE TONGUE. By Henry T. Butlin, F.R.C.S., D.C.L., and Walter G. Spencer, M.S., M.B., F.R.C.S., Surgeon to Westminster Hospital, Surgeon to St. Bartholomew's Hospital and in Charge of the Department for Diseases of the Nose and Throat. Illustrated with 8 Chromo-Lithographs and 36 Engravings. Cloth. Pp. 475. Price, $3.25. London, Paris, New York and Melbourne: Cassell & Co., Ltd. 1900.

MANUAL OF PATHOLOGY. Including Bacteriology, the Technique of Post-mortems, and Methods of Pathologic Research. By W. M. Late Coplin, M.D., Professor of Pathology and Bacteriology, Jefferson Medical College, Philadelphia. Third Edition, Revised and Enlarged. With 330 Illustrations and 7 Colored Plates. Cloth. Pp. 846. Price, $3.50. Philadelphia: P. Blakiston's Son & Co. 1900.

PSYCHOPATHIA SEXUALIS. With Especial Reference to Antipathic Sexual Instinct. A Medico-Forensic Study. By Dr. R. v. Krafft-Ebing, o. ö. Prof. Für Psychiatrie und Nervenkrankheiten an der K.K. Universität, Wien. The Only Authorized English Translation of the Tenth German Edition. Cloth. Pp. 585. Price, $5.00. Chicago: W. T. Keener & Co. 1900.

MEDICAL ELECTRICITY. A Practical Handbook for Students and Practitioners. By H. Lewis Jones, M.A., M.D., Fellow of the Royal College of Physicians. The Third Edition of "Medical Electricity," by W. E. Steavenson, M.D., and H. Lewis Jones, M.D. With Illustrations. Cloth. Pp. 532. Price, $3.00. Philadelphia: P. Blakiston's Son & Co. 1900.

ILLINOIS STATE BOARD OF HEALTH. Advance Notes of the Sanitary Investigations of the Illinois River and its Tributaries. With Special Reference to the Effect of the Sewage of Chicago on the Desl'laines and Illinois Rivers Prior to and after the Opening of the Chicago Drainage Canal. Cloth. Pp. 57. Springfield: Phillips. 1900.

MEDICAL DIAGNOSIS WITH SPECIAL REFERENCE TO PRACTICAL MEDICINE. A Guide to the Knowledge and Discrimination of Diseases. By J. M. Da Costa, M.D., LL.D., Physician to the Pennsylvania Hospital. Illustrated. Ninth Edition, Revised. Cloth. Pp. 966. Price, $5.00. Philadelphia: J. B. Lippincott Co. 1900.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS. A Manual for the Use of Physicians, Surgeons, and Students. By Charles W. Purdy, LL.D., M.D., Fellow of the Royal College of Physicians and Surgeons, Kingston. Fifth Revised and Enlarged Edition. With Numerous Illustrations, Including Photo-engravings and Colored Plates. Cloth. Pp. 392. Price, $3.00 net. Philadelphia: F. A. Davis Co. 1900.

PUBLIC HEALTH REPORTS. Issued by the Supervising Surgeon-General, Marine-Hospital Service, under the National Quarantine Act of April 29, 1878, and the Act Granting Additional Quarantine Powers and Imposing Additional Duties upon the Marine-Hospital Service, Approved February 15, 1893. Vol. xiv. Nos. 1 to 52. Cloth. Pp. 2389. Washington: Government Printing Office. 1900.

ORIGINAL CONTRIBUTIONS CONCERNING THE GLANDULAR STRUCTURES APPERTAINING TO THE HUMAN EYE AND ITS APPENDAGES. By Adolph Alt, M.D., Professor of Ophthalmology in Beaumont Hospital College, St. Louis. With 71 Original Illustrations. Cloth. Pp. 70. Price, $1.50. St. Louis: American Journal of Ophthalmology.

L'ASSISTENA DEI PAZZI NEL MANICOMIO E NELLA FAMIGLIA. Istruzioni elementari per infermieri ed infermiere. Dott. A. Pieraccini, Vice Direttore del Manicomio Provinciale di Macerata. Con Prefazione del Prof. E. Morselli, Direttore della Clinica Psichiatrica di Genova. Cloth. Pp. 64. Milano: Ulrico Hoepli. 1901.

LESSONS ON THE ANATOMY, PHYSIOLOGY AND HYGIENE OF INFANCY AND CHILDHOOD FOR JUNIOR STUDENTS. Consisting of Extracts from Lectures given at Rush Medical College. By Alfred C. Cotton, A.M., M.D. Cloth. Pp. 174. Price, $1.50. Chicago: Chicago Medical Book Co.

CLINICAL EXAMINATION OF THE URINE AND URINARY DIAGNOSIS. A Clinical Guide for the Use of Practitioners and Students of Medicine and Surgery. By J. Bergen Ogden, M. D., Instructor in Chemistry, Harvard University Medical School. Illustrated. Cloth. Pp. 416. Price, $3.00. Philadelphia: W. B. Saunders & Co. 1900.

A TEXT-BOOK OF PRACTICAL MEDICINE. By William G. Thompson, M.D., Professor of Medicine in the Cornell University Medical College, New York City. Illustrated with 79 Engravings. Cloth. Pp. 1011. Price, $5.00. New York and Philadelphia: Lea Brothers & Co. 1900.

SURGERY, ITS THEORY AND PRACTICE. By William Johnson Walsham, F.R.C.S., M.B., C.M., Surgeon and Lecturer on Surgery, St. Bartholomew's Hospital. With 483 Illustrations, Including 16 Skiagram Plates. Seventh Edition. Cloth. Pp. 951. Price, $3.50. Philadelphia: P. Blakiston's Son & Co. 1900.

REPORT OF THE MORTALITY RECORDS OF THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK. For Fifty-six years, from 1843 to 1898. By Elias J. Marsh and Granville M. White, M.D., Medical Directors. Cloth. Pp. 245. New York: Mutual Life Insurance Co. 1900.

THE MENTAL AFFECTIONS OF CHILDREN; IDIOCY, IMBECILITY, AND INSANITY. By William W. Ireland, M.D., Corresponding Member of the Psychiatric Society of St. Petersburg. Second Edition. Cloth. Pp. 450. Price, $5.00. Philadelphia: P. Blakiston's Son & Co. 1900.

THE LAW AND ITS RELATIONS TO PHYSICIANS. By Arthur N. Taylor, LL.B., of the New York Bar. Cloth. Pp. 534. Price, $2.50. New York: D. Appleton & Co. 1900.

ESSENTIALS OF MEDICAL AND CLINICAL CHEMISTRY. With Laboratory Exercises. By Samuel E. Woody, A.M., M.D. Fourth Edition, Revised and Enlarged. Illustrated. Cloth. Pp. 243. Price, $1.50. Philadelphia: P. Blakiston's Son & Co. 1900.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Volume xii. Twelfth Session, Held at New Orleans, La., December 5, 6, and 7, 1899. Cloth. Pp. 394. Published by the Association. 1900.

TRANSACTIONS OF THE KENTUCKY STATE MEDICAL SOCIETY. Forty-fifth Annual Session, Held at Georgetown, May 9, 10, and 11, 1900. Volume viii. Cloth. Pp. 253. Printed for the Society. 1900.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA. Thirtieth Annual Session, San Francisco, April, 1900. Vol. xxx. Cloth. Pp. 619. Published by the Society.

THE MICROTOMIST'S VADE-MECUM. A Handbook of the Methods of Microscopic Anatomy. By Arthur Bolles Lee. Fifth Edition. Cloth. Pp. 532. Price, $4.00. Philadelphia: P. Blakiston's Son & Co. 1900.

IDROTERAPIA. Del Prof. Gaetano Gibelli, Proprietario del gabinetto elettro-termo-baro-idroterapico, Milano, Via Manzoni, 50. Con 30 incisioni. Cloth. Pp. 237. Milano: Ulrico Hoepli. 1900.

PAMPHLETS.

BIENNIAL REPORT OF THE BOARD OF HEALTH OF THE CITY OF NEW ORLEANS, 1898-1899. Paper. Pp. 138.

CLINICAL AND PATHOLOGIC OBSERVATIONS ON SOME EARLY FORMS OF EPITHELIOMA OF THE SKIN. By J. A. Fordyce, M.D., New York. Reprinted from N. Y. Med Jour.

CONCOMITANT MEASLES, CHICKEN-POX AND SMALLPOX. A TYPE OF ENTERIC FEVER NOT TYPHOID. By Otto Lerch, A.M., M.D., Ph.D., New Orleans. Reprinted from New Orleans Med. Jour.

CONSTITUTION AND BY-LAWS OF AMERICAN THERAPEUTIC SOCIETY. Paper. Pp. 8.

A CONTRIBUTION TO THE TECHNIQUE OF MODERN URANOPLASTY. SIGMOID SINUS THROMBOSIS. By James F. McKernon, M.D., New York. Reprints.

DATOS PARA LA MATERIA MEDICA MEXICANA. Tercera Parte. Paper. Pp. 152. Mexico: Officina Tip. De La Secretaria De Formento. 1900.

EDUCATIONAL AND LEGISLATIVE CONTROL OF TUBERCULOSIS. By Charles Denison, A.M., M.D., Denver, Colo. Reprinted from The Journal A. M. A.

FIFTEENTH ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH and Vital Statistics of the Commonwealth of Pennsylvania and Minutes of the Board. Presented by the Secretary, Benjamin Lee, M.D., November 23, 1899. Paper. Pp. 141. Wm. Stanley Ray, State Printer of Pa.

THE FRACTURE OF THE RIBS. By W. A. Kuflewski, M.D., Chicago.

HEREDITY IN DISEASE. By G. Archdall Reid, M.B., F.R.S., Southsea. Reprinted from the Scottish Medical and Surgical Journal.

MEDICINE AS A BUSINESS PROPOSITION. By G. Frank Lydston, M.D., Chicago. Paper. Pp. 32. Price $0.25. Chicago: Riverton Press.

NEURASTHENIA: SOME POINTS IN ITS PATHOLOGY AND TREATMENT. REPORT OF A CASE OF TUMOR OF THE CEREBELLUM WITH DRAINAGE OF FLUID THROUGH THE NOSE. By G. W. McCaskey, A.M., M.D., Fort Wayne, Ind. Reprints.

OCULAR COMPLICATIONS OF VARIOLA. By Geo. F. Keiper, M.D., Lafayette, Ind. Reprinted from Med. and Surg. Monitor.

PROCEEDINGS OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY. May. Paper. Pp. 240. Philadelphia. Published by the Society.

PROCEEDINGS OF THE PATHOLOGIC SOCIETY OF PHILADELPHIA. July. Paper. Pp. 240. Philadelphia: Published by the Society.

PUS IN THE PELVIS. Difficulties Encountered and Surmounted in Operations on the Female Pelvic Organs. By John L. Jelks, M.D., Memphis, Tenn. Reprinted from the Memphis Med. Monthly.

RAMPANCY, THE FERVOR OF THE FOREHEAD A Study of the Anterior Metopic Lobule. By Wallace Wood, M.D. Reprinted from the N. Y. Med. Jour.

REPORT OF THE BOARD OF CENSORS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA. Submitted to, and Adopted by, the Association, During the Meeting Held in Montgomery, April 17-20, 1900. Paper. Pp. 32. Montgomery, Ala.: Brown Printing Co. 1900.

BOARD OF HEALTH OF THE STATE OF NEW JERSEY. Circular 100. TRANSPORTATION OF THE DEAD. Paper. Pp. 23. Trenton, N. J.: John L. Murphy Publishing Co.

A UNIQUE CASE OF DOUBLE INGUINAL HERNIA. By W. T. Eckley, M.D., and Charles Davidson, M.D. Reprinted from Chicago Clinic.

TRADE PAMPHLETS.

ASSIMILATION OF PHOSPHORUS. CLINICAL REPORTS ON HYPO-QUINIDOL. INTERNAL ADMINISTRATION OF IODIN. By. R. W. Gardner, Pharmaceutical Chemist. New York.

THE WELLCOME CHEMICAL RESEARCH LABORATORIES. By Burroughs, Wellcome & Co.

EUQUININE. TANNALBIN. By Merck & Co.

New Patents.

Patents of Aug. 7 to 27, of interest to physicians:

655,540. Vaginal syringe, Anton Arlt, Bad Sommerstein, Germany.

655,190. Suturating instrument, Louis Bramson, Copenhagen, Denmark.

655,601. Hernial truss, Rollo W. Browne, Washington, D. C.

655,206. Truss-pad, Austin J. Davidson, Douglas City, Cal.

655,481. Device for promoting growth of hair, Frederick W. Evans, St. Louis, Mo.

655,485. Water bag, Lorenzo M. Hansen, Moorestown, N. J.

655,490. Muscle kneader, Rudolph Hollem, Sioux City, Iowa.

655,365. Hernial truss, Henry M. Johnson, Minden, Iowa.
655657. Syringe, Frederick J. Lander, Rochester, N. Y.
655,509. Obstetrical appliance, Haldora Olson, Duluth, Minn.
655,413. Magnetic drinking cup, Herbert A. Parkyn, Chicago.
655,514. Umbilical truss, Howard C. Rash, Salina, Kan.
655,458. Making superphosphates, Heinrich Saxl, San Francisco, Cal.
655,529. Amido-sulfonic acid, Joseph Turner, Huddersfield, Eng.
655,665. Apparatus for heating and sterilizing fluids, Addison G. Waterhouse, and J. S. Forbes, Philadelphia, Pa.
655,317 Electric temperature indicator, Leslie S. Wilder, Springfield, Mass.
33,049 Design, douche pan, Daniel Hogan, New York City.
655,961. Truss, Lorenz A. Deuther, Buffalo, N. Y.
655,782. Soda water dispensing apparatus, Charles F. Kade, Sheboygan, Wis.
655,061. Producing formaldehyde vapors, Jean J. A. Trillat, Paris, France.
655,744. Syringe. Washington S. Valentine, New York City.
656,072. Soda-water apparatus, Joseph O. Wild, Holyoke, Mass.
655,747. Electromedical vacuum apparatus, George W. Winckfield, Alameda, Cal.
656,180. Machine for manufacturing nerve broaches, etc., James H. Downie, Detroit, Mich.
656,182. Sound-collector for the ears, Wm. G. Ehrhardt, New York City.
656,253. Making sodium carbonate crystals, Josef Kunstner, Obersedlitz, Aussegg, Austria-Hungary.
656,738. Combined hobby-horse and invalid's chair, Alvin J. Branham, Springfield, Mo.
656,992. Disinfectant, James L. Mortimer and J. H. Williams, Liverpool, Eng.
656,657. India-rubber water bag, John Parette, Montreal, Can.
657,003. Glycerinized vaccin lymph, Edward M. Parker, Washington, D. C.
656,862. Corn-shield, Marcus Straussberg, Newark, N. J.
656,914. Vaccin-point carrier, Ralph Walsh, Washington, D. C.
33,126. Design, atomizer casing, Isaac Q. Gurnee, Butler, N. J.
33,125. Design, inhaler, Hiram L. True, McConnellsville, Ohio.

Change of Address.

O. F. Allen, Mt. Vernon, to Mt. Olive, Ill.
M. W. Bland, Galion, to Shelby, Ohio.
A. B. Bonar, 157 W. 47th St., to 146 W. 94th St., New York City.
C. W. Baker, Blanchard, Ohio, to Stanwood, Iowa.
W. H. Boone, 197 Wood St., Chicago, to Chrisman, Ill.
Thos. H. Barlow, Alexandria, Minn., to Rush Medical College, Chicago.
H. Bergstein, Reno, Nev., to Cracker Bldg., San Francisco, Cal.
J. H. Bogle, Collinsville, to Luttrell, Ala.
T. E. Courtright, 186 W. Ninth Ave., to 859 Oak St., Columbus, Ohio.
E. L. Clawson, 18 N. McCamley St., to 232 Van Buren, W., Battle Creek, Mich.
W. C. Cundiff, Huntsville, Tenn., to Somerset, Ky.
A. Crawford, Miles, to Mt. Vernon, Iowa.
W. R. I. Dalton, 101 Convent Ave., New York City, to Delaware Water Gap, Pa.
H. G. Ebert, 412 N. 34th St., Philadelphia, Pa., to University Station, Charlottesville, Va.
Frank LeMoyne Hupp, Hulett's Landing, Lake George, to 318 W. 57th St., New York City.
S. L. Fridus, 661 W. 14th St., to 4834 S. Ashland Ave., Chicago.
W. R. Ford, Ft. Atkinson, Wis., to 6537 Perry Ave., Chicago.
B. R. Gary, 127 28th St., to 128 33rd St., Newport News, Va.
A. Graydon, Bloomsburg, to Homestead, Pa.
G. E. Garwood, Deshler to Leipsic, Ohio.
E. Gleitsman, 710 Fullerton Ave., to 1732 Diversey Boul., Chicago.
P. A. Haley, Paint Creek, to Hinton, W. Va.
F. H. Hacker, 310 Meeting St., to 113 Ashley Ave., Charleston, S. C.
W. H. Hill, Gentryville, Mo., to Peoria, Ill.
C. W. Heath, 16 Astor St., to 404 LaSalle Ave., Chicago.
E. C. Hackett, 121 W. 14th St., Dubuque, Iowa, to 298 Maxwell St., Chicago.
C. E. Ide, Newport, N. H., to 192 E. Superior St., Chicago.
S. H. Kempner, Milford, Conn., to 168 W. 130th St., New York City.
George M. Lucas, Malta, to 265 Milwaukee St., Elgin, Ill.
W. C. Leary, Fitten Bldg., to Austell Bldg., Atlanta, Ga.
A. O. Loe, Crookston, Minn., to York Bldg., Seattle, Wash.
H. G. Mertins, Ashland, to Washburn, Wis.
W. W. Miller, 84 Worcester St., Boston, Mass., to 52 E. Range St., University of Virginia, Charlottesville, Va.
L. F. Michael, Dulce, N. M., to Ponca City, O. T.
H. C. Miller, Gibbs Blk., Findlay, Ohio, to Cambria, Mich.
John L. Morse, 317 Marlborough St., to 70 Bay State Road, Boston, Mass.
Geo. W. May, Haverhill to Cascade, Iowa.
W. O. Nisbet, Waxhaw, to Charlotte, N. C.
L. J. Perkins, Pendleton Ore., to 2909 University Ave., Des Moines, Iowa.
F. Purdue, Alto Pass, to Lyndon, Ill.
M. Ravn, Scandinavia, to Merrill, Wis.
J. B. Sweeney, Manistique, Mich., to Green Bay, Wis.
J. Sjoquist, Chicago, to Holdrege, Neb.
F. D. Stricker, 337 E. Congress St., to 616 Elmwood Ave., Detroit, Mich.
M. Scanlan, Lost Nation, to DeWitt, Iowa.
E. R. Scholten, 4603 State St., to 4412 Wabash Ave., Chicago.
W. A. Starner, 169 Ponce de Leon Ave., to 24 Kelly St., Atlanta, Ga.
C. A. Smith, 1003 Spruce St., Philadelphia, Pa., to English-American Bldg., Atlanta, Ga.
T. E. Taylor, Steele Blk., to Denison Blk., Denver, Col.
R. H. Wright, Petersburg, Va., to Haskins Hospital, Wheeling, W. Va.
J. W. Worrell, Brownsville, to 128 S. Negley Ave., Pittsburg, Pa.
C. E. Wehrle, 1006 Washington St., to 2109 Robinwood Ave., Toledo, Ohio.
G. H. Willis, 6917 Eggleston Ave., Chicago, to Galien, Mich.
F. J. Will, Eagle Grove, to Equitable Bldg., Des Moines, Iowa.
W. B. Wells, Milton, Wis., to 108 Honore St., Chicago.
C. E. Weber, 5554 Ellis Ave., to 4304 Grand Boul., Chicago.
W. H. Walker, Utica, Neb., to 750 Harrison St., Chicago.
J. G. Wilkins, Fitten Bldg., to Groat Bldg., Atlanta, Ga.
J. E. Wheat, Los Angeles, to Fernando, Cal.
W. N. Wade, Lompoc, to 1516 Castillo St., Santa Barbara, Cal.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., August 22 to 28, 1900, inclusive:

James K. Ashburn, acting asst.-surgeon, from Batavia, Ohio, to San Francisco, Cal., to accompany troops to the Philippines.

Louis Brechemin, major and surgeon, U. S. Army, sick leave extended.

Joseph J. Curry, acting asst.-surgeon, leave of absence granted on account of sickness.

Calvin DeWitt, lieutenant-colonel, deputy surgeon-general, on expiry of present leave to report at St. Paul, Minn., for duty as chief surgeon, department of Dakota, to relieve Colonel Joseph P. Wright, assistant surgeon-general, U. S. Army.

P. C. Field, acting asst.-surgeon, leave of absence extended.

Aubrey F. Higgins, acting asst.-surgeon, former orders revoked; he will proceed to Philadelphia, Pa., for annulment of contract.

David J. Johnson, acting asst.-surgeon, former orders amended to read from Plattsburg Barracks to Fort Ontario, N. Y.

William L. Little, acting asst.-surgeon, from Fort Clark to San Antonio, Tex., for duty with troops of the 25th Infantry under orders for the Philippines.

Robert J. Marsh, acting asst.-surgeon, from the department of Alaska to Portland, Ore., for annulment of contract.

William O. Owen, major and surgeon, U. S. Army, to represent the medical department of the army at the meeting of the American Health Association at Indianapolis, Ind., October 1 to 5, 1900.

Benjamin F. Pope, lieutenant-colonel, deputy surgeon-general, U. S. Army, from temporary duty at the Presidio of San Francisco, Cal., to permanent station at that post.

William E. Purviance, captain and asst.-surgeon, U. S. Army, from Fort Egbert, Alaska, to duty in the Department of California.

Charles Richard, major and surgeon, U. S. Army to represent the medical department of the army at the meeting of the American Public Health Association at Indianapolis, Ind., October 1 to 5, 1900.

William E. Richards, lieutenant and asst.-surgeon U. S. Army; previous orders amended to read from Fort Ontario to Plattsburg Barracks, N. Y.

Charles F. Sanborn, acting asst.-surgeon, previous orders directing him to proceed to San Francisco, Cal., to accompany troops on foreign service revoked.

Herbert F. Saunders, acting asst.-surgeon, from Greenville, Ala., to San Francisco, Cal., to accompany troops going on foreign service.

Herman J. Schlageter, acting asst.-surgeon, from the Department of Alaska to Vancouver Barracks, Wash., for temporary duty.

Howard W. Seager, acting asst.-surgeon, from Des Moines, Iowa, to San Francisco, Cal., to accompany troops going on foreign service.

Henry A. Shaw, captain and asst.-surgeon, U. S. Army, former orders amended so as to direct him to report at San Francisco, Cal., for transportation to Manila, for duty in the Division of the Philippines.

William D. Shelby, acting asst.-surgeon, on expiry of present leave to proceed from Fort Thomas, Ky., to San Francisco, Cal., for duty with troops going on foreign service.

Alva D. Williams, acting asst.-surgeon, from Jacksonville, Fla., to San Juan, Porto Rico, for duty in that Department.

William B. Winn, major and surgeon, U. S. Vols., former orders amended so as to direct him to report at SanFrancisco, Cal., for transportation to Manila for assignment to the Division of the Philippines.

Navy Changes.

Changes in the Medical Corps of the U. S. Navy for the week ending Sept. 1, 1900:

Medical Inspector P. M. Rixey, commissioned medical inspector from Aug. 24, 1900.

Surgeon G. T. Smith, commissioned surgeon from Aug. 24, 1900.

P. A. Surgeon A. M. D. McCormick, detached from the *Chicago* and ordered to the *Montgomery*.

Asst.-Surgeon J. R. Whiting, detached from the *Montgomery* and ordered to the *Chicago*.

P. A. Surgeon M. R. Pigott, ordered to the Naval Academy immediately.

Asst.-Surgeon C. A. Crawford, detached from the *Chesapeake* and ordered to the *Eagle*.

P. A. Surgeon L. W. Spratling, detached from the naval hospital, Yokohama, Japan, upon reporting of relief, and ordered to report to the commander-in-chief of the Asiatic Station for such duty as may be assigned.

Asst.-Surgeon F. L. Benton, detached from the naval hospital, Cavite, P. I., and ordered to the naval hospital, Yokohama, Japan, for duty.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ending Aug. 30, 1900:

Surgeon P. M. Carrington, granted leave of absence for one month from Sept. 4.

Surgeon L. L. Williams, to assume charge of Purveying Depot for two days.

Surgeon G. T. Vaughan, granted leave of absence for fifteen days from Sept. 1.

P. Asst.-Surgeon W. G. Stimpson, granted leave of absence for fifteen days from Aug. 28.

P. Asst.-Surgeon J. M. Eager, granted leave of absence for four months from Nov. 30—permission to go beyond sea.

P. Asst.-Surgeon A. R. Thomas, to proceed to Glasgow, Scotland, for temporary duty.

Asst.-Surgeon G. M. Corput, granted leave of absence for seven days.

Asst.-Surgeon F. J. Thornbury, granted three days' extension of leave of absence.

Acting Asst.-Surgeon J. P. C. Foster, granted leave of absence for sixteen days from Aug. 28.

Acting Asst.-Surgeon J. W. Stevenson, granted leave of absence for twenty-one days from Sept. 3.

Hospital Steward, George A. Morris, to proceed to New York (Stapleton), and report to medical officer for duty and assignment to quarters.

APPOINTMENT.

Mark H. Watters, of Vermont, appointed junior hospital steward.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended Aug. 31, 1900:

SMALLPOX—UNITED STATES.

Alaska: Cape Nome, from beginning of outbreak to Aug. 23, 23 cases.

Colorado: Denver, Aug. 11-15, 3 cases; Garfield county, Aug. 4, 1 case; Las Animas County, Aug. 7, 1 case.

Louisiana: New Orleans, Aug. 18-25, 9 cases, 2 deaths.

New York: New York, Aug. 18-25, 1 death.

Ohio: Cleveland, Aug. 18-25, 4 cases; Dayton, Aug. 18-25, 1 case; Portsmouth, Aug. 18-25, 2 cases.

SMALLPOX—FOREIGN.

Austria: Prague, July 28-Aug. 1, 8 cases.

Belgium: Antwerp, July 28-Aug. 4, 2 cases.

Egypt: Cairo, July 22-29, 1 case.

England: London, Aug. 4-11, 5 cases.

France: Lyons, July 28-Aug. 4, 2 deaths.

Germany: Berlin, Aug. 10, 3 cases.

Gibraltar: Aug. 5-12, 2 cases.

India: Bombay, July 24-31, 2 cases.

Russia: Moscow, July 28-Aug. 4, 2 cases, 2 deaths; Odessa, July 28-Aug. 11, 108 cases, 29 deaths; Warsaw, July 28-Aug. 4, 7 deaths.

YELLOW FEVER.

Colombia: Barranquilla, Aug. 5-12, 1 death; Panama, Aug. 13-20, 4 cases.

Costa Rica: Port Limon, Aug. 22, 1 case on S. S. *Cunard*, from Colon.

Cuba: Havana, Aug. 4-11, 18 deaths; Matanzas, Aug. 26, 1 case.

France: Havre, Aug. 11, 1 case on S. S. *Caravallas*, from Lorenzo Marques, via Senegal; Aug. 13, several cases on S. S. *Santa Fe* from Lorenzo Marques, via Senegal.

Mexico: Merida, July 3, 7 cases, 4 deaths; Tampico, Aug. 16, 1 death.

CHOLERA.

India: Bombay, July 22-31, 379 deaths; Madras, July 21-27, 5 deaths.

PLAGUE.

Australia: Sydney, to July 28, 302 cases, 102 deaths.

India: Bombay, July 24-31, 45 deaths.

Scotland: Aug. 31, 11 cases.

Turkey: Smyrna, from outbreak to Aug. 6, 22 cases, 11 deaths.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

61 Market Street : : Chicago, Ill.

Cable Address: "Medic, Chicago"

Subscription price: Five dollars per annum in advance

Postage in the United States and Canada, Mexico, Hawaii, Guam, Porto Rico, and the Philippines, free; foreign postage, $2.50. Subscriptions may commence at any time. Volumes begin with the first issue of January and of July.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

The qualifications for membership require that the applicant be a member, in good standing, of a state or local medical society entitled to send delegates to the annual meeting of the AMERICAN MEDICAL ASSOCIATION. A list of these societies will be sent on request. Applications must be accompanied with a certificate showing that the applicant is a member of a recognized society, and should be sent with the annual dues—five dollars—to the treasurer, Dr. Henry P. Newman, 100 Washington Street, Chicago. Members receive THE JOURNAL free. Subscribers to THE JOURNAL may become members of the ASSOCIATION without additional expense if they are members of medical societies recognized by the ASSOCIATION. Those desiring to have their names transferred from the subscription to the membership lists should send certificates as above, with a receipt for their subscription to THE JOURNAL, covering the current fiscal year.

FISCAL YEAR.

The fiscal year of the AMERICAN MEDICAL ASSOCIATION is from January 1 to December 31; and the annual dues paid by a new member cover only the fiscal year, no matter at what time of year the membership is obtained. Those who pay their dues and join the ASSOCIATION at the annual meeting in June, for instance, pay only for the fiscal year which ends with the December following, and the annual dues for the following fiscal year are payable the succeeding January, at which time the treasurer sends a statement to each member. Such members, however, are entitled to THE JOURNAL for the full year, even though the membership be not continued.

PAPERS READ AT THE ANNUAL MEETING.

"Every paper received by this ASSOCIATION and ordered to be published, and all plates or other means of illustration, shall be considered the exclusive property of the ASSOCIATION. . . The Board of Trustees shall have full discretionary power to omit from the published transactions, in part or in whole, any paper that may be referred to it by the ASSOCIATION or either of the Sections, unless specially instructed to the contrary by vote of the ASSOCIATION." (From Article V of the By-laws.)

NEWS.

Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to members of the medical profession. We shall be glad to know the name of the sender in every instance.

ORIGINAL PAPERS.

Articles are accepted for publication with the understanding that they are contributed solely to this journal.

COPYRIGHT.

Matter appearing in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION is covered by copyright, but as a general thing, no objection will be made to the reproduction of anything appearing in its columns if proper credit be given.

CONTRIBUTIONS TYPEWRITTEN.

It will be satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great to the editor and printer. We can not promise to return unused manuscript.

Half-tones, zinc etchings and other illustrations will be furnished by THE JOURNAL when photographs or drawings are supplied by the author.

ADVERTISEMENTS.

Advertising forms go to press eight days in advance of the date of issue. Therefore, in sending in copy, time should be allowed for setting up advertisements and for the sending and return of proofs. Advertising rates will be made known on request.

CHANGE OF ADDRESS.

In ordering a change of address it is important that both the old and new addresses be given.

REMITTANCES.

Remittances should be made by check, draft, registered letter, money or express order. Currency should not be sent, unless registered. Stamps in amounts under one dollar are acceptable. Make all checks, etc., payable to "JOURNAL AMERICAN MEDICAL ASSOCIATION," except those for annual dues. These should be made payable and sent direct to the Treasurer, Dr. Henry P. Newman, 100 Washington Street, Chicago.